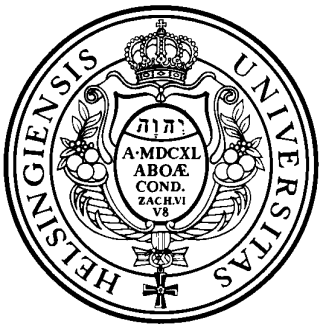

Master's Thesis

Development Geography

Local agency, involvement and initiative in biodiversity conservation in Ranomafana National Park, Madagascar

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2015

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Tiivistelmä – Referat – Abstract

Biodiversity conservation, as human activity, is inherently political. Attempts to preserve species and habitats with strict Protected Areas in the Global South often take place in already inhabited regions. Conservation has been often externally imposed on the local, rural communities, resulting in deprivation of their livelihoods and breaking up of their natural resources management traditions, but also in local opposition that threatens conservation outcomes. However, as rural livelihoods depend directly from their surrounding ecosystems, rural communities and conservation planners are argued to have substantial common interests.

This study tries to understand the relationship between local communities and conservation authorities in order to create knowledge on how they could form partnerships and work together for natural resources management. This case study took place is Ranomafana National Park in South-Eastern Madagascar where several villages were visited in order to gain knowledge of conservation from the point of view of local communities. The case study follows ethnographic approach using qualitative, semi-structured interviews as the principal method of data collection. Employing a political ecology approach and looking at the institutional arrangements guiding conservation at the local, national and global levels and across formal and informal spheres, this study looks at the power relations in the current forms of co-management and the social impacts they have at the local level. Finally it tries to find out if any form of partnership is formed; if local people are able and willing to manage their natural resources in cooperation with conservation authorities.

Although conservation has significant negative impacts on local livelihoods in Ranomafana region, in practice community participation to decision-making is very limited and the local people find it hard to get their voice heard. The results of the case study indicate that the main obstacle for co-management is the failure to respect the rights of local communities to equitable treatment, to recognition as stakeholders, and to participation in decision-making. The feeling of being disrespected creates resentment and mistrust towards conservation authorities. In these circumstances, economic incentives offered do not support community empowerment but rather create dependence from external help. Co-management activities can also enforce the existing inequalities at the local level if only the more powerful segments of communities are included. The case study also shows that local communities are important actors in conservation, able to challenge it – or support it if they view the rules as legitimate – but the actual community self-organising for conservation requires at least some authority over their surrounding ecosystem.

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Political ecology, protected areas, local communities, community-based conservation, participation, environmental justice, institutions, Madagascar

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Tiivistelmä – Referat – Abstract

Luonnon monimuotoisuuden suojelu on ihmistoimintana synnynnäisesti poliittista. Yritykset suojella lajeja ja elinympäristöjä tiukoilla suojelualueilla globaalissa etelässä usein sattuvat jo asutuille alueille. Usein paikallisyhteisöt pakotetaan ulkopuolelta tuleviin suojelusääntöihin, jotka aiheuttavat heidän elinkeinojensa ja luonnonvarojen hallintaan liittyvien perinteidensä katoamista, mutta myös paikallista vastustusta, joka uhkaa myös suojelun tuloksia. Kuitenkin maaseudun elinkeinot ovat suoraan riippuvaisia paikallisesta ekosysteemistä, minkä vuoksi on esitetty, että paikallisyhteisöillä ja luonnonsuojeluauktoriteeteilla on huomattavia yhteisiä intressejä.

Tämä tutkimus pyrkii ymmärtämään paikallisyhteisöjen ja suojeluauktoriteettien välistä suhdetta luodakseen tietoa siitä, kuinka nämä voisivat muodostaa kumppanuussuhteen ja työskennellä yhdessä hallinnoidakseen luonnonvaroja. Tämä tapaustutkimus sijoittuu Ranomafanan kansallispuistoon, Kaakkois-Madagaskarille, jossa vierailtiin useissa kylissä, jotta saataisiin tietoa luonnonsuojelusta paikallisyhteisöjen näkökulmasta. Tapaustutkimus seuraa etnografista lähestymistapaa käyttäen laadullisia, puolistrukturoituja haastatteluja pääasiallisena aineistonkeruumenetelmänään. Käyttämällä poliittisen ekologian lähestymistapaa ja katsomalla suojelua ohjaavia instituutioita paikallisella, kansallisella ja globaalilla tasolla ja halki muodollisten ja epämuodollisten sfäärien, tämä tutkimus katsoo valtasuhteita nykyisissä yhteishallinnan muodoissa sekä niiden sosiaalisia vaikutuksia paikallisella tasolla. Lopuksi tutkimus pyrkii selvittämään, onko minkäänlaista kumppanuutta luotu; kykenevätkö ja haluavatko paikalliset ihmiset hallinnoida luonnonvarojaan yhteistyössä luonnonsuojeluauktoriteettien kanssa.

Vaikka suojelu vaikeuttaa merkittävästi paikallisia elinkeinoja Ranomafanan alueella, yhteisöjen osallistuminen päätöksentekoon on käytännössä erittäin rajallista ja paikallisten on vaikea saada ääntään kuuluville. Tapaustutkimuksen tulokset osoittavat, että suurin este yhteishallinnalle syntyy, jos ei kunnioiteta paikallisyhteisöjen oikeuksia oikeudenmukaiseen kohteluun, osallisuuden tunnustamiseen sekä päätöksentekoon osallistumiseen. Epäkunnioituksen tunne luo kaunaa ja epäluottamusta suojeluauktoriteetteja kohtaan. Näissä oloissa tarjotut taloudelliset kannustimet eivät tue paikallisyhteisöjen voimaantumista vaan luovat riippuvuuden ulkopuolisesta avusta. Yhteishallintatoimet voi myös vahvistaa olemassa olevia paikallistason eriarvoisuuksia, mikäli vain yhteisöjen voimakkaammat segmentit otetaan niihin mukaan. Tämä tapaustutkimus osoittaa, että paikallisyhteisöt ovat tärkeitä toimijoita luonnonsuojelussa, jota ne kykenevät haastamaan – tai tukemaan, mikäli kokevat säännöt legitiimeiksi – mutta varsinainen yhteisön toimiminen yhdessä suojelun hyväksi vaatii edes jossain määrin oikeutta ympäröivän ekosysteemin hallintaan.

Avainsanat – Nyckelord – Keywords
Poliittinen ekologia, luonnonsuojelualueet, paikallisyhteisöt, yhteisölähtöinen luonnonsuojelu, osallistuminen, ympäristöoikeudenmukaisuus, instituutiot, Madagaskar

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List of Abbreviations

CBC	Community-Based Conservation
CBNRM	Community-Based Natural Resources Management
CLP	Comité Locale de la Protection (Local committee for protection)
COSAP	Protected Area Orientation and Support Committee
CVB	Centre ValBio
ICDP	Integrated Conservation and Development Project
MNP	Madagascar National Parks
NP	National Park
PA	Protected Area
PES	Payments for Ecosystem Services
PSSE	Social and Environmental Safeguards Plan
RNP	Ranomafana National Park
QCA	Qualitative Content Analysis

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1. Introduction

The growing concern about the state of biological diversity on our planet has raised global calls for increased nature protection, especially in tropical biodiversity hot-spots such as Madagascar. The aim of protecting habitats and species has often taken the form of strict Protected Areas (hereafter PAs), designed and set up to minimise human influence in the area (Brockington 2002). Despite the scientific rationalisation of conservation, experience from decades of protected area management reveal inherent problems and challenges related to the social dimensions of conservation (Adams & Hutton 2007). In the Global South, PAs are often established in areas inhabited by small-scale rural communities whose livelihood depends largely on the direct subsistence use of natural resources, to suddenly find themselves confronted with a powerful, and externally imposed conservation agenda (ibid.). Indeed, local communities have often been the ones paying the highest price for global conservation benefits (Agrawal & Redford 2009). In this context, and already since the 1980s, there has been a gradual move towards more inclusive conservation strategies that have taken many different forms and approaches (Kothari et al. 2013; Berkes 2004).

The overarching aim of this study is to understand the relationship between conservation and local communities through a case study of a few specific communities around Ranomafana National Park in South-Eastern Madagascar. Key questions are: how does the global conservation discourse influence local realities, and how could externally initiated conservation agendas work with, not against, local community interests? Using an ethnographic approach, the study places local individuals and communities at the focal point of the research, with an attempt to i) understand their agency, incentives, and involvement in national park management, ii) examine how they are influenced by global and national conservation processes, and iii) question how they might be adapting to, or contesting the imposed rules and regulations associated with the national park. This study also analyses, based on local experiences, how the institutional arrangements governing PA management encourage or dis-encourage local participation in conservation efforts, and what kinds of social implications the current form of governance has. Understanding natural resource management requires analysing the relationship among institutions at different scales of governance and across formal and informal spheres (Leach et al. 1999), which is why this study looks at conservation actors at multiple levels and spheres, the authorities they possess, and the rules and norms that guide their action.

The study draws largely from the theory of political ecology which, defining conservation as primarily human activity, attempts to find answers to conservation problems from the ways in which humans are organised and power shared (e.g. Brechin et al. 2002; Gezon 2007; Berkes 2004). Questions of environmental justice, legitimacy and representation in governance, and empowerment of local communities (e.g. Adams & Hutton 2007; Schlosberg 2013) are addressed in order to understand the reasons for local perceptions of conservation and give hints on what the possibilities for local social organisation for managing natural resources might be, further developed by common property theory (e.g. Ostrom 1990; Agrawal & Gibson 1999).

Below, I first present the broader discourse on PAs, their ideological roots and social impacts, as well as the shifts towards newer conservation models that attempt to integrate local communities in PA management (in Chapter 2). Chapter 3 lays out the theoretical framework of the study and presents the research questions emerging from the theory. Chapter 4 introduces the context of the case study: it describes the history and institutional arrangements of conservation in Madagascar in general and in Ranomafana National Park specifically, and finally considers how the current management plan addresses or involves local communities. Chapter 5 presents the methods of data collection and analysis and describes the study area. Results of the analysis are presented in Chapter 6 followed by a general discussion of the results and methodological questions in Chapter 7, and a brief conclusion in Chapter 8.

2. Conservation in the Global South

This chapter gives a brief presentation of the history and main concepts related to biodiversity conservation and Protected Areas. The aim is to understand how the originally western conservation discourse shapes the realities in the Global South, and how it affects especially rural, local communities in biodiversity hotspots. Forced displacements and disregarding local communities' rights have led to harsh effects on local communities but also to resistance and conflicts with conservation authorities. The answers to these problems have been sought in conservation models aiming at integrating local communities in conservation by addressing their economic needs and, more recently, by giving them rights to manage their natural resources.

2.1 Ideology and colonialism in nature conservation

The Global Biodiversity Strategy (WRI, IUCN, UNEP, 1992) defines conservation as a human activity aiming at managing the human use of the biosphere so that it can sustainably fulfil the needs of current and future human populations. As such, conservation can take different

approaches, from restoration and sustainable use of natural resources to preservation, meaning strict non-use.

The understandings of the relationship of indigenous or local communities with the ecosystems they inhabit are extremely important of the practise and policy of conservation (Agrawal & Gibson 1999; Robbins 2012). The idea that local communities are the main threat to biodiversity are manifested e.g. in the form of fenced national parks and conservation policies aiming to exclude local people from natural habitats around the world (e.g. Brockington 2002). Such conservation policies were first initiated by colonial powers and later imposed on post-colonial states and embedded in the strategies and mandates of international conservation agencies (Brockington 2002; Pyhälä 2003). Even though originally imposed from outside, the "fortress conservation" model continues to be strongly supported by many African governments (Brockington 2002).

The national park as a model of conservation first emerged in the USA in the late nineteenth century (Adams & Hutton 2007; Peters 1999). The idea of 'wilderness' which needs to be preserved from any human intervention was created on the one hand out of the idea of nature having intrinsic value and on the other hand out of a more anthropocentric will to preserve nature for the growing urban population's recreational needs. These ideas reflect the deep seated Western conceptual division between nature and humans that continues to influence much of the global conservation paradigm still today. The "governance" of nature that is pursued through the development of science (assuming that nature can be understood, manipulated and controlled) was evident already in European imperialism from the sixteenth century onwards (Adams & Hutton 2007). At that time, Africa was presented as 'wilderness' in the European imagination determining what Africa should look like and driving the establishment of national parks (Neumann 1998).

Narratives of untouched nature and isolated communities, depicted by categories of landscapes as "natural" or "pristine" versus "human-influenced" are challenged by historical ecologists who show how people have been influencing biodiversity and forest structure around them for millennia (e.g. Balée 1994). Many comparative studies show the coincidence of high biodiversity and cultural and linguistic diversities (Maffi 2005). The stereotype of the "ecologically noble savage" – primitive cultures, harmoniously managing their natural resources in isolation from the rest of the world – first emerged among Europeans in the 17th century to describe native Americans and critique the modern, European society (Hames 2007). Later, this stereotype has been argued to be a romanticised illusion while in reality, local communities – and their relation to their surrounding environment – are much more complex

and diverse. Redford (1991, cited in Hames 2007: 180) and others have argued that over-exploitation or natural resources by native groups was prevented more likely by low population density, low level of technological development, and lack of external market than by any deliberate conservation efforts. Scholars of common property (e.g. Ostrom 1990, Agrawal 2007) on the other hand, have argued that communities can organise and manage their natural resources sustainably (further discussed in Chapter 3.5).

The number of PAs in southern colonies grew rapidly after the Second World War in Africa and in the 1970s in Latin America. By 2005, the number of PAs worldwide had amounted to more than 100,000, covering over 2 million km² and existing in every country of the world (Adams & Hutton 2007). The International Union for Conservation of Nature (IUCN 2014) has defined seven categories of protected areas of which the Strict Nature Reserve is the most exclusionary category aiming at strictly controlling human visitation, use and impacts and to a large extent to exclude all other human activity from the area.

2.2 Social impacts of Protected Areas

Strict protected areas can cause a variety of problems to local, neighbouring communities. Impacts and risks to local people include direct and indirect economic, social, and cultural losses: landlessness, joblessness, homelessness, economic marginalisation, food insecurity, increased health problems, increased mortality, loss of access to common property and services and social marginalisation (Adams & Hutton 2007).

The most discussed negative phenomenon related to PAs is population displacement (Agrawal & Redford 2009). Displacement has many meanings and Agrawal & Redford (2009) define it as "*involuntary physical removal of peoples from their historical or existing home areas as a result of actions by governments or other organizational actors*" (Agrawal & Redford 2009: 2). They also acknowledge 'exclusion' or 'loss of access' to vital assets and current or future livelihood opportunities as a related phenomenon that can occur without any physical resettlement. Also new, environmental risks may arise due to displacements and exclusion as traditional production systems are dismantled or people are moved to environments where their means of production are less applicable or competition for remaining resources increases (World Bank 2004). Consequently, the creation of PAs has potentially enormous implications not only on local livelihood and economy but also on local culture, identity, and social structure as community institutions and social networks are weakened (Adams & Hutton 2007).

In a post-colonial context, corruption is a common problem that affects the ways in which conservation policies are put into practice (Adams & Hutton 2007). Despite the last few decades

of calls for more participatory approaches in conservation and development projects, local people have in fact rarely been consulted or in any way involved in planning or designing PAs, let alone in managing them or their fair share of the related revenues or benefits (Brown 2002; Adams & Hutton 2007). Also, local people often face unjust or even abusive treatment by the park staff (such as severe punishments or bribes to avoid arrest) for minor violations of park boundaries or rules (such as cutting fuelwood or collecting medicinal plants) (Adams & Hutton 2007).

Protected areas can also generate benefits. The direct benefits are nowadays often referred to as "ecosystem services" that all life depends on, i.e. clean air, clean water, species richness, etc. (Adams & Hutton 2007). There are also more tangible, economic benefits: the biodiversity and landscapes of protected areas serve as an attraction to international tourism, with potential to bring income to local communities directly from entrance fees or employment, or indirectly from related economic activities (ibid.). Also, development funds and social investments are increasingly allocated to the zones around protected areas (ibid.).

Small-scale illegal extraction of resources often takes place in PAs: illegal hunting, gathering or making charcoal can all bring income for those who carry out such activities (Adams & Hutton 2007), although in such small amounts that it is often the poorest in a society who are left to risk such illegal activities for poor rewards (e.g. Twinamatsiko et al. 2014). Attempts to disincentivize such illegal activities often involve alternative development projects such as revenue sharing and "community outreach" programs including education, income-generating projects, health clinics, and more (Naughton-Treves et al. 2005; Gezon 2006). However, such outreach activities have been found to bring very meagre, if any, direct benefits (Naughton-Treves et al. 2005). The distribution of income from these different sources is another important issue. If income is distributed within the existing social settings and power relations, it can easily exacerbate the inequalities that already exist in the community and/or wider society: i.e. the power to gain and distribute benefits remains in the hands of the employees of the national park and local elites (Brown 2002; Adams & Hutton 2007).

Adams and Hutton (2007) point out a somewhat ironical feature of conservation: while all local land uses may be forbidden in protected areas, tourism and science are regarded as tolerable activities. Science has an integral role in conservation and its place in protected areas is not much questioned (ibid.). Tourism, then again, has many negative impacts that have long been recognised, but its place in PAs continues to be promoted partly because of the important economic contribution of the tourist industry to national parks, and partly because the "urban population's recreation values" continue to be one of the drivers of national park ideology

(ibid.). These recreational values, however, mostly serve international tourists and national elites while local people are denied access, both to natural resources and to park revenues. In sum, and as observed in many protected areas worldwide, local rural populations continue to pay the price for global conservation benefits (Agrawal & Redford 2009).

The question thus remains: who decides the extent of burden, cost, or negative impact that local populations can bear or tolerate in order for others (e.g. foreign tourists or the global community) to be able to benefit, through e.g. supposed carbon storages in forest vegetation and biodiversity protection? This question that is further discussed in the theory of environmental justice (in Chapter 3.2) may have been asked too seldom in conservation planning, but not without consequences: displacements due to conservation have not taken place without opposition. The exclusionary conservation approach has in many cases caused conflicts with local populations (Brockington 2004). Brockington argues that rural communities are often politically weak and ill-equipped to contest protected areas that usually are mandated by national governments, supported by international NGOs, and who are able to use coercive power and threaten people with fines, imprisonment, or violence. Nevertheless, Agrawal and Gibson (1999) state that decades of top-down conservation practices prove that coercive conservation generally fails: the capacity of a state is limited to force its citizens to comply with resource use rules that are conflicting their interests, especially when there are no livelihood alternatives and when PAs are so inaccessible, large, distant, and therefore extremely difficult and/or costly to patrol. There are cases where local opposition has reversed the outcomes of conservation policy and forced conservation planners to recognise local communities' rights (see e.g. Peters 1999, Roth 2004, Cox & Elmqvist 1997). In sum, the exclusionary strict protected area model has been criticised for being unethical towards local community rights (Brockington et al. 2006), costly (Watson et al. 2014), and ineffective in achieving conservation objectives as deforestation accelerates outside park boundaries isolating habitats (Naughton-Treves et al. 2005; Mora & Sale 2011).

2.3 Towards more inclusive conservation

The concerns of harsh social impacts of exclusive PAs on local communities have increased and raised discussion of the rights of local communities and the need to develop conservation models that integrate local needs. Conservation discourse has shifted from favouring strict, exclusionary PAs towards more ethically justifiable and socially and economically inclusive conservation policies (Adams & Hutton 2007). Importantly, indigenous peoples and local communities have increasingly begun to claim a stewardship over their ancestral lands

(Agrawal & Gibson 1999). The Durban Action Plan drawn in the 5th IUCN World Parks Congress in 2003, envisions existing and future PAs that are established and managed without compromising the rights of indigenous peoples and local communities (IUCN 2004). These groups should have representatives in the management of protected areas and participatory mechanisms should be established for the restitution of the territories taken previously without free and informed consent of local peoples.

In the last three decades, the global international conservation movement has sought to include local communities in conservation in order to effectively and sustainably manage ecosystems and species (Kothari et al. 2013; Berkes 2004). The more inclusive conservation models such as different Integrated Conservation and Development Projects (ICDP's) that emerged from the 1980s onwards mainly address economic incentives of local communities to protect their environment and use it sustainably (Adams & Hutton 2007). Economic compensations and income-generating activities can generate enthusiasm at early stages but as these rarely have any relevance to the actual biodiversity protection and lack tangible, genuine, and long-lasting benefits, local commitment is not likely to sustain (Pyhälä 2003). Payments for Ecosystem Services (PES) is an approach where local resource managers are rewarded for maintaining healthy ecosystems that also provide ecosystem services (Kosoy & Corbera 2010). The criticism of PES concentrates on the definitions of ecosystem cervices as *commodities* that can be sold and bought. Kosoy & Corbera (2010) argue that this is technically difficult and has implications on how people relate to nature as it undermines the complexity of ecosystems and the multiplicity of values related to them.

Indeed, purely economic incentives presented to local communities may be too narrow, simplistic, and insufficient in changing individual behaviour (Berkes 2004). This may be due to the dynamics within a community, and whether it can be ensured that the benefits are shared equitably (Kull 2002). Second, money is not necessarily enough to incentivize changes in local behaviour; various social and political benefits such as fair distribution of rights to access resources may be even more important in defining forms of rural life (Berkes 2004). Miller et al. (2014) strongly criticise the current conservation paradigm of larger environmental NGOs for their outright utilitarian ethic that parallels with neoliberal economic philosophy with its apparently empty assumption that increasing affluence would reduce human impacts on nature (also Corson 2011). They argue that participation in the market economy often encourages over exploitation of natural resources, threatening both biological and *cultural* diversity as few traditional cultures survive the imposition of monetary and materialistic values that characterise the modern market economy. Similarly, Hanson (2012) observes that environmental awareness

raising based on a scientific world view involves teaching the conception of nature as a set of resources and the role of human beings as an *individual* user or manager, both of which are deeply contradictory to many traditional cosmo visions.

In sum, the conservation models concentrating on economic incentives seem to be problematic in two respects. First, if the economic activities do not have a direct link to biodiversity conservation itself and if they are unreliable, they are unlikely to generate local commitment for conservation. Second, the encouraged participation to market economy involves the related world views and values of modern market economy that threaten traditional cultures and are argued to be contradictory to conservation goals.

2.4 Community-based conservation

The newer policy initiatives that are moving away from the economic incentives thinking include different Community-Based Conservation (CBC), Community-Based Natural Resources Management (CBNRM) initiatives, and Indigenous Peoples' and Local Community Conserved Territories and Areas (ICCAs) (Kothari et al. 2013; Berkes 2004). The idea of these approaches is to confer the management authority to local communities who are dependent on the local ecosystems and consider them as their ancestral land.

It has been argued that local communities possess time and place specific knowledge that offers them abilities to design more appropriate management practices than what a distant government agency could create (Agrawal & Gibson 1999). Community-based conservation (CBC) emerged in the 1990s and is also known as community-based natural resources management (CBNRM). The main idea is for rural communities to manage and benefit from the natural resources they depend on. Community-based conservation approach has further developed with the growing literature on indigenous knowledge (e.g. Berkes 1999), and local management institutions (e.g. Ostrom 1990).

It has been noted that local communities wishing to maintain their culture and rights to land have substantial common interests with conservationists who want to protect the ecosystem for its biodiversity (Adams & Hutton 2007). The 'environmentalism of the poor' states that in many conflicts concerning large-scale resource extraction or waste disposal, poor people often support the preservation of nature rather than industrial development (Martinez-Alier 2013). This is because often their survival – water sources or land for grazing and agriculture – depends on nature preservation. The 'environmentalism of the poor' sees the fight for human rights and environment as inseparable while, paradoxically, often these goals have been seen as contradictory. If local resource use rules and norms are in line with conservation goals, then

theoretically at least conservation should work with, and even be supported and strengthened by local institutions (Brosius & Russell 2003; Berkes 2004). However, conservation in its modern, Western sense, is rarely the goal of local institutions, the latter of which are usually built around the use, allocation, and management of certain resources and can therefore even be contradictory with certain conservation goals (Berkes 2004). This may make it challenging for conservation planners to regard local people as allies, and vice versa, as finding and defining common objectives that would benefit both stakeholders may be difficult.

CBC projects have had their share of criticism too. In many cases, CBC projects have not succeeded in rectifying the shortcomings of ICDPs and local communities continue to bear the harsh consequences of conservation with little participation in conservation activities (Hanson 2012). There are two views on why CBC initiatives have often failed (Berkes 2004). According to the first view the objectives of conservation and development should be delinked; a project with a mix of different objectives is unlikely to succeed in any of them. This search for "win-win" solutions to the contradicting goals of conservation and poverty alleviation is difficult because these problems are very different (Adams & Hutton 2007). There are arguments for separating these two goals because the conventionally natural science trained conservation planners and park managers are not prepared to tackle the structural problems such as poverty, unequal land and resource allocation, corruption, and market failure.

According to the second view, the failure of CBC initiatives is caused by improper implementation, not the impracticality of the concept (Berkes 2004; Wilshusen et al. 2002). Especially devolution of authority is often insufficient for changing the subaltern position of local communities in the face of conservation proprietors, leading to a repetition of the mistakes of conventional, strict, top-down conservation policies. Typically short-term funded projects often lead to short-sightedness and strive for immediate results whereas getting consent and participation from local communities can be very time-consuming. As Brockington (2002) points out, any shift to CBC in post-colonial settings most probably needs to evolve in the same, rigid, institutional frameworks that previously have supported conservation that excludes local communities from any decision-making.

Contrary evidence also exists: in their comparative analysis of CBCs worldwide, Brooks et al. (2012) found more successes than failures in resulting attitudes and behaviours, and in ecological and economic outcomes supporting the effectiveness of CBC. They suggest that challenges caused by national context and local community characteristics can be overcome by good project design and implementation.

This chapter has presented the shifts in global conservation discourse in relation to local communities in Global South. The more recent community-based conservation literature views the problematic relations between conservation and local community interests as related to sharing of power and rights, not only of economic benefits. The next chapter continues to conceptualise the issues of power, justice, and community involvement in the governance of natural resources.

3. Theoretical framework

This chapter presents the theoretical framework of the case study. This study uses Political Ecology approach as it attempts to understand conservation by looking at human organisation, distribution of power and questions of justice. Political ecology approach is presented in Chapter 3.1. Chapter 3.2 looks at conservation from the point of view of legitimacy of governance and environmental justice, both of which suggest that the most beneficial and ethically justifiable way of conservation governance involve strong participation of local communities in negotiation. Public participation is further conceptualised in Chapter 3.3, and the chapter also discusses community empowerment as a crucial factor in the success and depth of participation, as well as divisions and power asymmetries within a community that pose further challenges to any participatory conservation initiative. Chapter 3.4 presents institutional theory which attempts to understand how, then, groups of people can self-organise and take initiative to manage their natural resources. Finally, the research questions emerging from the presented theory are introduced in chapter 3.5.

3.1 Political ecology

Political ecology emerged in the 1970's as a transdisciplinary field of study that looks at the relationships between the natural and the social (Adams & Hutton 2007; Robbins 2012). Political ecology analysis attempts to understand how landscapes come to be: i.e. what are the mechanisms and processes by which people establish, negotiate, and contest land uses and access to resources (Gezon 2006). The kinds of physical actions we take to shape landscapes, or places, is inherently affected by our social constructions of what is and what could be. These are affected by social structures at different scales, from local to regional, national, and global (Gezon 2006).

Power in political ecology is conceptualised as "*a social relation built on an asymmetrical distribution of resources and risks*" (Hornborg 2001 cited in Gezon 2006:11), an idea that offers understanding to different kinds of environmental conflicts (Korhonen 2006). Political ecology

analyses the environmental condition and change as a result of power relations that define an actor's access, use, and control over natural resources. Political ecology also inspects and deconstructs narratives of environmental change illustrating their political dimensions (Robbins 2012). Actors at different levels, be they individuals or groups, possess different positions, perceptions, interests, and rationalities in relation to the environment, all of which guide their actions (Gezon 2006; Robbins 2012). Which "meanings" or ideologies become dominant is determined in continuous power struggles among the actors who use the power they possess to advance their ideas and interests at the same time as dominant ideas enforce the patterns of power distribution (Robbins 2012).

In some cases, political ecology analyses have been criticised for overemphasising the social dimension of the environment (Pollini 2010). The narratives created in these social-constructivist analyses may serve the emancipatory purposes of the weak by revealing the broader, political circumstances, but this could lead to forgetting the ecological factors. Pollini accuses these analyses of disregarding "nature" as a distinct category for objective, scientific examination focusing only on the *representations* of nature and using the neutral notion of environmental 'change' when 'degradation' would be a more accurate description. In contrast, Gezon (2006) argues that the value of the political ecology approach is that by analysing global processes in specific landscapes and places, it can examine the policies, ideologies, and power structures within a material context, including biophysical aspects. Gezon states that "*While nature exists apart from the narratives about it, human treatment of it is always political*" (Gezon 2006: 194). Environmental change or degradation cannot therefore be understood as separate from political processes.

3.2 Conservation as an element of human organisation

Nature conservation is by definition a social and political process – a matter of human organisation (Brechin et al. 2002). Thus, the strength of human organisation, the commitment and cooperation of social actors defines the success in biodiversity protection. For this reason, Brechin et al. (2002) present that conservation planning should address elements of human dignity (or environmental justice), legitimacy, accountability, and governance among other things.

Governance is a broad concept regarding questions such as who decides, on what authority and what ground rules (Brechin et al. 2002). Arrangements of decision making and power sharing are constantly renegotiated because they are to a large extent based on legitimacy. For any behaviour or setting to be legitimate, it needs to be defined as just, correct, and appropriate by

the society (Weber 1978). Authority, then again, means 'legitimate power', the public acceptance of a political system or ruler to use power to influence the public. Brechin et al. (2002) emphasise the importance of negotiation and suggest that the focus should not be on "*voluntary versus enforced compliance – – but rather on fair enforcement or legitimate social control*" (Brechin et al. 2002: 46). It would be more practical and longer-lasting to negotiate agreements that all participants approve rather than use resources to enforce reluctant, local communities to obey rules that they view as unjust. Brechin et al. (2002) remind that rights to equal participation and self-determination come with responsibilities. Each, equal, negotiating party is responsible to holding up the mutually agreed rules and commitments and effectively pursue the goals.

Brechin et al. (2002) present that promoting debate, compromise, and power sharing among actors involved in conservation appears to be a promising route to a legitimate process but this is only possible when human dignity and questions of environmental justice are properly addressed. Schlosberg (2013) examines the pluralistic understandings of environmental justice. The dimensions of environmental justice usually referred to in academic literature and by environmental movements are *equity*, *recognition*, and *participation* (Schlosberg 2013). The concerns on equity question how equally environmental risks and benefits are distributed. The observation that the highest environmental risks are often faced by the marginalised groups of the society raise questions of recognition: are all affected social groups recognised as stakeholders having rights. Participation, the possibility to speak for oneself, is also seen as an essential dimension of environmental justice (ibid.). Not surprisingly, environmental justice discourse developed around the notion that it is most often the weakest social groups at the local level who bear the heaviest environmental impacts but who have the least power to influence decision-making (Schlosberg & Carruthers 2010). The discourse began with questions of "environmental racism" in the USA, and has provided an important frame for understanding land struggles of indigenous and local communities around the world (ibid.).

Berkes (2004) argues that in conservation, the main focus should be at the community level, as the cooperation of local people is key to long-lasting conservation benefits. He states that centralised management in conservation fits poorly in complex systems that involve an interplay of actors and institutions across space and across levels of organisation. According to the subsidiary principle, decision making and dispute solving should preferably take place at the lowest organisational level, i.e. the local community, and government regulation should step in only when necessary, e.g. in solving disputes between different communities or external actors (Anderson 2000; Berkes 2004). Subsidiary principle is often used to argue for

decentralisation of power which aims at including the whole society in decision-making through entrusting power to representative, local authorities (Ribot et al. 2010). The next sub-chapter looks at participation in conservation and discusses the related need for power sharing and community empowerment.

3.3 Public participation and empowerment

Public participation is an important component of governance. Participation can be analysed according to levels of participation, as suggested e.g. by Pretty & Smith (2004), who portray participation along six stages or degrees presented in Table 1. The lowest (i.e. least participatory) level is *passive participation* in which information goes only top-down, from the authorities to local communities (Pretty & Smith 2004). The second level is that of *consultative participation*, where information is extracted from participants. In the third level, participation is *bought* from participants for the exchange of cash or material benefits. In *functional participation* the objectives are predetermined for the participants ensuring that the goals of external rulers are met. *Interactive participation* involves participants in analysis and planning, and it strives for strengthening the local groups and institutions. And finally, *self-mobilisation* means that people take initiative independently to manage their natural resources, implying that they retain the authority to control those resources. It has been recorded that positive conservation outcomes rarely emerge with passive, consultative, and bought types of participation (ibid.).

Table 1. Levels of participation (Pretty & Smith 2004)

Level of participation	Description
Passive participation	Participants are told what has already been decided
Consultative participation	Participants answer questions posed by the authority but are not involved in decision-making
Brought participation	Participation for food, cash, or other material benefits
Functional participation	Participation is organised by the authority to meet predefined objectives
Interactive participation	Participation in analysis, development of action plans, and strengthening of local institutions
Self-mobilisation	People take initiative independently, community has control over resource use

Participation of local communities in conservation initiatives has been criticised as often being insufficient and temporary in nature and thus not creating any stable authority at the local level. The critiques continue that top-down management often employs lowest levels of participation (Brown 2002; see Table 1). Brown (2002) argues that the forms of participation where the participants remain passive, are sometimes used strategically by authorities to meet calls for community involvement but they do not help correcting power imbalances and can even exacerbate underlying conflicts (see e.g. Castro & Neilson 2001).

Chambers defines empowerment as a "*process by which people, especially poor people, are enabled to take more control over their own lives and secure a better livelihood with ownership of productive assets as one key element*" (Chambers 1993: 11). Empowerment thus requires ownership of resources and other assets, ownership implying also some authority to control them. Without empowerment, decentralisation of management power would only give the local communities new responsibilities but no rights and this would mean a deepened top-down power (Kull 2002; Ribot 2004; Anderson 2000). There are many cases where the state has taken local labour to its own purposes increasing the state power and control over local level (Ribot 2004). In order to effectively manage resources at the local level, the actors need to have the authority over the three following stages (Agrawal & Gibson 1999).

1) Negotiation and definition of the rules about the use, management, and conservation of resources. The ones having the authority over rule-making have the rights to access, use, and conserve the resources and determine who are excluded from or included in these activities.
2) Implementation of the rules. This is the authority over monitoring that the use happens according to the rules.
3) Arbitration of disputes. Implementation can result in different types of disputes that must be tried to resolve. The authority over arbitration of disputes requires also rights and capacities to order sanctions and to ensure that they are followed.

In most community-based conservation initiatives, only the second stage of authority presented above is given to the local actors: they are given the task of implementing rules that continue to be created and disputes resolved by government agencies (Agrawal & Gibson 1999). This does not support community empowerment and is not a form of real decentralisation of power (ibid.).

As the level of community empowerment appears to be a significant factor in determining the success of participatory conservation initiatives, another important issue is the existing power

imbalances within communities and the question how to assure equitable outcomes from participatory conservation processes. All societies have divisions based on gender, wealth, caste, ethnicity etc. and access to natural resources is contested between these groups (Kull 2002; Agrawal & Gibson 1999). Also in rural communities, the ways of using natural resources can vary significantly between the wealthy and the poor, women and men, etc. Although geographic proximity may define who are included in the use of a same resource, it does not necessarily create unity of interest (Kull 2002).

If the conventional view of "traditional community" as a homogeneous unit is questioned, the objectives of "empowering the locals" to manage their natural resources or "decentralizing the management authority to a community" become problematic (Kull 2002; Agrawal & Gibson 1999; Berkes 2004). Who is the relevant local authority a conservation project should communicate with (Gezon 2006)? Which are the legitimate community institutions and do they actually represent all community, including women, immigrants, and other groups (Kull 2002; Gezon 2006)?

In many cases, pre-existing informal rules of social interaction create structural barriers for certain groups to gain meaningful roles in the new, participatory, formal structures (Saito-Jensen et al. 2010). It is possible that augmenting the power of local leaders who fail to consider all groups of the community will only deepen the divisions in communities and lead to non-compliance and resistance (Kull 2002; Gezon 2006). 'Elite capture' is a problem commonly recognised in conservation projects and development projects in general (Ribot 2004; Saito-Jensen et al. 2010). The more privileged members of community can dominate decision-making and ensure their improved access to collective benefits at the expense of the others. As Gezon (2006) points, by the choice of who to cooperate with projects can either reinforce the existing power asymmetries or they can empower segments of population that have been marginalised.

3.4 Institutions, incentives and initiative

The dynamics within community and the conditions under which communities can self-organise to manage their natural resources are studied by scholars of common property. Theories of common property have emerged from 1980's onwards to challenge the "tragedy of the commons", an influential theory popularized by Hardin (1968), that presents that individuals who act rationally according to their self-interest end up depleting a commonly owned resource contrary to the interests of the whole group. This is because the benefits of resource use are gained by the individuals whereas the negative effects of resource depletion are experienced by the group. Often, then, the option to protect resources boils down to strong

state control or private property rights. “New institutionalist” work of Ostrom and others has presented contradictory cases to the “tragedy of the commons” (Ostrom 1990). By focusing on small scale common property resources users Ostrom’s work has enlightened the institution building in a group of people interdependent from each other’s actions asking how they can organise and govern themselves without external assistance to guarantee long-term mutual benefits and avoid opportunistic actions.

Institutions can be seen as the rules that shape the social life and mediate between social and ecological systems (Berkes 2004). Institutions define the way the systems are able to learn and adapt, reorganise, and deal with change. They are not, however stagnant constructs that are able to force individual action always to the same form (Agrawal & Gibson 1999). Individual actions constantly reshape institutions and they should be seen more like provisional agreements on how to deal with things. Institutions govern social life and decision-making at the local, national, international, and global levels and in broader political economy (Leach et al. 1999; Folke et al. 2007). Understanding natural resource management requires analysing the relationship among institutions at different scales of governance and between formal and informal spheres (Leach et al. 1999). E.g. land tenure rights are often issued by Forest Department, formally legitimised by the state, and defended in courts of law, but at the same time contested by local communities who adhere to traditional property rights legitimised by social norms and codes of behaviour related to their ancestral lands (ibid.).

While integration of traditional norms in conservation in post-colonial contexts is proposed to provide non-costly, voluntary, and respectful conservation approaches (Colding & Folke 2001), it has to be remembered that the maintenance of these informal institutions depends on the recognition of local management authority (Ostrom 1990). One cannot assume maintaining a set of management institutions if they become unnecessary when the real management authority is taken by central government. National governments may help or hinder local self-organisation but if local authority is not formally recognised it is difficult for users to establish resource management rules (Ostrom et al. 1999).

Sufficient *incentives* are presented in the theory of the commons as one of the key factors pushing individuals and groups to self-governance (Ostrom 1990). Incentives are benefits that actors can expect to gain if they succeed to sustainably use their resources. The early approaches of ICDPs sought to create economic incentives for conservation – often without any direct link or mechanism between these two goals (Peters 1999). As realised by many shortcomings of ICDPs, the economic incentives do not automatically result in an *internal initiative* in a community. In fact, they can be even counterproductive in this respect. As described by Talbot

(1995) in a Malian context, years of top-down governance and related development approaches led to a situation where the overly supervised and assisted farmers where incapable of taking initiative but only waiting for external intervention. Anticipated incentives in conservation are found to be useful in motivating community engagement, but community self-organisation process requires also many other factors such as leadership (one or more key people who drive the discourse), shared views, skills, and knowledge, as well as partnerships with supportive organizations and government (Seixas & Davy 2008).

As can be seen, community self-organisation and the development of internal initiative are complex processes affected by many different factors. What becomes clear, however, is that the external, 'higher-level' governance can have an essential supportive or restricting role (Ostrom 1990, 1999). It can allow local resource users some rights based on which they can create management institutions, or it can deny these rights risking degradation of local social organisation and creation of local resistance to any imposed, environmental rules.

3.5 Research Questions

This case study exemplifies the issues discussed in this chapter by looking at local agency, possibilities of involvement, and initiative in biodiversity conservation in Ranomafana National Park. The first research question emerging from the theory presented above is:

1) *How do and can local communities get involved in conservation of a national park, post-creation?*

In the first question, 'involvement' is firstly understood as public participation and representation of local communities' aspirations in decision-making. The components of PA co-management defined at the national level (MNP 2014), their implementation, and the resulting forms of participation are inspected through local experiences. The extent to which authority is gained by local communities in these processes affects the extent and meaning of participation in conservation governance (Pretty & Smith 2004; Kull 2002; Ribot 2004). Secondly, involvement is not viewed narrowly, taking place only within the forms predefined by the conservation authority; rather, local communities and individuals also influence conservation through informal, and sometimes illegal, actions and arenas (Gezon 2006).

2) *What kinds of social outcomes does top-down conservation have at the local level?*

Following the concern raised by e.g. Kull (2002) and Berkes (2004) that conservation and development policies often result in deepened inequalities at the community level, the second research question inspects social outcomes of conservation. These include social and economic

equity within and among local communities related to incentives offered and restrictions imposed by the PA, but also the equity in getting involved: are all social groups able to participate in co-management?

3) *To what extent are local communities willing and able to manage their natural resources and cooperate with conservation authorities?*

Based on the literature presented above, the assumption is that PA governance can have a great impact on community self-organisation and the level of participation in conservation (Ostrom 1990, 1999; Brown 2002). This is impacted e.g. by the extent to which local people's rights are respected (rights to equity, participation, and representation i.e. environmental justice (Schlosberg 2013)) (Ostrom 1990, 1999). The third research question looks at local reactions to top-down governance, and asks whether co-management actually results in some kind of partnership or even approval by the local communities (see e.g. Brechin et al. 2002).

4. The Malagasy context and the case study

What kinds of national and local institutional arrangements govern Protected Area management? This chapter discusses this question through a literature review presenting an overall network of local formal and informal institutions, national institutions and global discourses guiding conservation at the national level as well as locally in RNP.

4.1 Local institutions and traditional management practices

Traditional natural resources management in Madagascar is based on a complex system of formal and informal institutions (Kull 2002). The imposed rules by the colonial power and the post-colonial state co-exist with the traditional institutions to some extent (Gezon 2006), but also the breaking down of traditional institutions has been recorded (Jones et al. 2008).

In villages, the traditional leader is called *ampanjaka* and he rules the village with the village elders, *rey amin-dreny* (Kull 2002). These formal rulers and institutions organising the rural Malagasy society are called *fanjakana* aside of which the *fokonalona,* i.e. the traditions and customs, serve as informal rules and norms (Elmqvist et al. 2007). The informal agreements and management of natural resources at the village level is based on both *fanjakana* and *fokonalona.* According to Gezon (2006), rural governance and handling of disputes in Madagascar takes place within diffuse settings of multiple, overlapping sources of authority. In her study villages near a PA in Northern Madagascar, she found that kinship, regional and national legislation, and foreign development and conservation imperatives all provide frames

that guide local behaviour, impose some understandings of the world, and define commitments to different social arrangements (Gezon 2006). Gezon (2006) observed rural people adhering to several of these frames simultaneously.

Traditional, local environmental knowledge has become a centre of interest for much research seeking for informal institutions that govern the use of wild species. One form of such traditional institutions are taboos that exist in most cultures around the world and include social norms enforced by social pressure or fear for supernatural retribution (Colding and Folke 2001). In Madagascar, the system of *fady*s forms this kind of a set of informal institutions that (at least the ones related to natural resource use) can encourage sustainable harvesting practices (Colding & Folke 2001; Jones et al. 2008). It has been argued that traditional institutions can effectively provide conservation benefits when the capacity of the state to enforce conservation rules is limited (Colding and Folke 2001). In addition, Jones et al. (2008) state that by integrating informal institutions in conservation, synergies with conservation objectives can be found and local people's roles in conservation can be more fairly acknowledged.

Research by Jones et al. (2008) in villages neighbouring Ranomafana National Park, the context of this case study, found *fady*s that offer significant protection to at least five endangered species, among several other endemic species of birds, mammals, and plants. To mention one example, a *fady* that forbids commercial harvesting of crayfish has resulted in protection of a very rare endemic crayfish species. Jones et al. (2008) found *fady*s governing the timing and method of harvesting wild species that originate from an attempt to sustainably manage natural resources. The variety of very specific *fady*s also indicate the high level of environmental knowledge the rural people have. Jones et al. (2008) also observe the breaking down of traditional mechanisms that regulate resource extraction where people have lost the right to manage the resources. *Tompon-tany* is a Malagasy concept indicating ownership and stewardship of land, and with losing this status to RNP they also lost the authority to regulate their own resource use and to exclude other actors from the forests (ibid.). The results, recorded by Jones et al. (2008), are breaking down of *fady*s and anger towards RNP authorities, expressed for instance in the form of intentional killing of endangered animals that traditionally are secured by *fady*s. In villages that have community-managed forests, *fady*s were found to be more stable (ibid.).

4.2 Conservation and narratives of environmental change in Madagascar

According to the conventional, colonial narrative, Madagascar has once been covered with a uniform, evergreen forest that has been gradually destroyed as a result of human settlement on the island (Pollini 2010). This idea gave justification to the repression of traditional land uses and is still influential among decision-makers and conservation actors. The more recent research by paleobotanists, archaeologists, and palaeontologists challenges the vision of totally forested island proposing that the pre-human vegetation of Madagascar was a mosaic of savannahs, forests, and grassland (Pollini 2010). However the research also shows that the human settlement on the island increased the environmental change and that the existing forests are but small degraded remnants of what there once was (Figure 1).

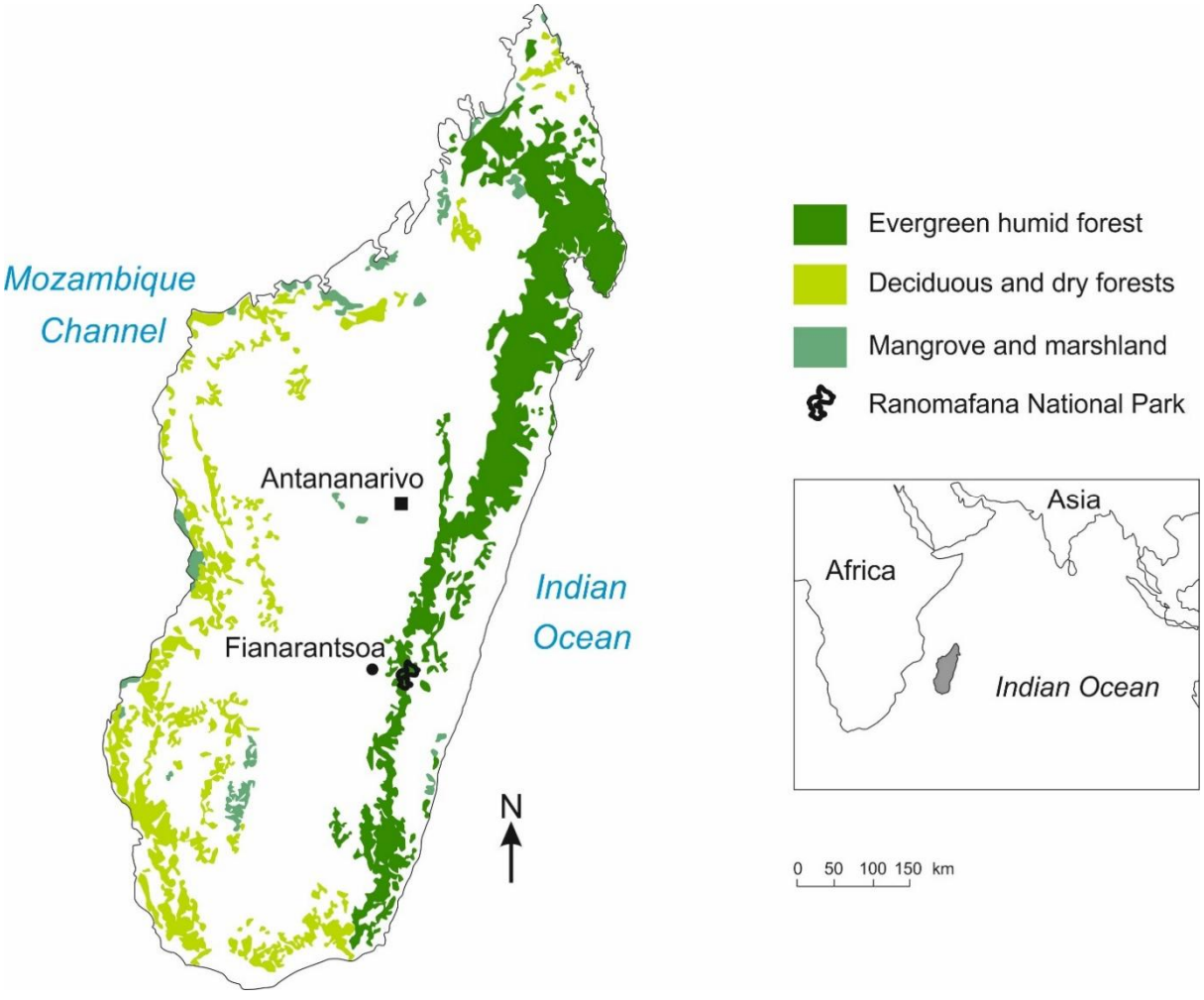

Figure 1. Forests of Madagascar and location of Ranomafana National Park.

The French colonial rule since 1896 has been seen as an important factor in breaking down of the local forms of forest management that once existed (Peters 1999). The most fertile land of the island was appropriated by French and Chinese plantation owners for irrigated rice, banana,

and especially coffee production. The residents of these lands were forced to leave and they moved to the uninhabited areas of the island and began cultivating upland forested slopes for subsistence (ibid.). This expanded and accelerated the practice of *tavy* further in the forest areas. *Tavy* is the Malagasy name for traditional slash and burn agriculture. It is a key agro-pastoral tool for traditional farmers and herders in Madagascar as in many other tropical countries (ibid.).

For colonial rulers, fire represented backward techniques threatening forests and plantations, and conservationists joined the concern for Madagascar's unique species and habitat loss (Kull 2004). Consequently, since 1913 the French colonial power criminalised burning with both rhetoric and repressive tools: all dry-season burning was criminalised, heavy anti-deforestation regulations put in practice, and the villages relocated several times (ibid.). This resulted in mass revolts and resistance and actually accelerated *tavy* and deforestation (Kull 2002, Peters 1999). The resistance against fire restrictions by the Malagasy peasants took advantage of the anonymity of released fire as well as the administrative contradictions and has been successful for a century in spite of the continuous anti-fire campaigns and legislation. Fire became a weapon of peasants' everyday resistance; it became a symbol of independence and fight against the French colonialism and is today used to express dissatisfaction with the state policies (Pollini 2010). There are recorded examples of indigenous peoples in Madagascar deciding that they rather see their forest destroyed than in the hands of foreigners; as soon as forest belonged to the colonial power, local communities either stopped taking care of it or even intentionally burnt it (Pollini 2010).

Peters (1999) states that the contemporary conservation strategies in Madagascar face the same difficulties and resistance as a century ago since their prohibitive legislation is seen by the local populations in the historical context as an analogy of the ban on *tavy*. The anti-fire discourse persists among the country's urban elites, the state, and external agencies, while *tavy* continues to be a symbol of freedom and resistance for the rural population (Kull 2002). Fairhead and Leach describe in their book *Misreading the African Landscape* (1996) how a hundred years of repression and anti-fire rhetoric in forest-savannah mosaic areas has created difficulties for communication between the state and the people. The anti-fire campaigning has reached even the most remote parts of the country. This has led to unspoken (but also unresolved) tensions between the national government and local populations, whose livelihoods continue to depend on opening up new land for cultivation with the use of *tavy*. Communication is often blocked as well: authorities have limited knowledge of local level realities, and local rural people are often unaware of the actual content of the national laws.

4.3 The failed National Environmental Action Plan

Conservation in Madagascar was directed since 1991 by the National Environmental Action Plan (EAP) (Hanson 2012; Pollini 2010). The plan was guided by a comity composed of state, NGO, and donor actors. It composed of three phases, each of which included efforts to deepen the participation of local communities in conservation. The first phase (1991–1997) introduced integrated conservation and development initiatives (ICDP) and the second (1997–2003) community-based natural resources management (CBNRM) approaches including the contractual forest management law GELOSE. Under this law, community associations (COBAs) were established to make agreements with the Malagasy Forest Service and municipalities that granted certain management rights to the association. The third phase primarily focused on increasing the protected area of Madagascar according to the "Durban Vision" announced in 2003 by President Ravalomanana. While the new System of Protected Area legislation attempted to allow closer cooperation for conservation planners and local community associations it also gave substantial amount of power to the forest service, foreign conservation organizations and mining interests (Corson 2011). These agents were thus given a greater authority over land-use decisions further disregarding the aspirations of rural communities. Each phase was heavily criticised and in the end, after 15 years and 450 million USD spent, by most accounts the EAP had failed to significantly reduce deforestation and land degradation causing negative impacts to the local populations (Pollini 2010).

The EAP ended in 2008, and in 2009 – with the coup d'état by Andry Rajoelina – the country entered into a political turmoil, leading to the cutting of all the international financing of Madagascar National Parks, the agency administrating all Madagascar's protected areas (Hanson 2012; Director of RNP 2014, personal communication). After this the country has seen the rise of market-based mechanisms aimed at conservation, seeking benefits through the creation of market values for ecosystem services. Conservation in Madagascar continues to be controlled by elites and foreigners and remains far from being a democratic process (Hanson 2012).

4.4 The case study: Ranomafana National Park

The Ranomafana National Park (RNP) is situated in Ranomafana region of Fianarantsoa province in the mountainous range of eastern Madagascar (see Figure 1). The national park covers 43,500 hectares of tropical rainforest in the topographically diverse landscape, with altitudes varying between 400 to 1,374 metres above sea level (Korhonen 2006). The forest of Ranomafana region is estimated to provide habitat for around 2000 endemic species and

numerous species still unknown to science making it a priority area for both research and conservation.

The human settlement in Ranomafana region started around the late 18th and early 19th centuries (Peters 1999). The area and its residents have been ruled by the Merina monarchy, the French colonisation (1897–1958) and currently the independent Malagasy state. Currently, there are about 160 villages that are divided into 35 *fokotanys* within five kilometres of RNP's borders. The *fokotany* is the lowest official administrative unit below the *commune rurale*: serving on average 400–1200 citizens (Kull 2002). The human population in Ranomafana area consists of two self-identified cultural groups, the Tanala and Betsileo, of which the Tanala inhabit low lands east and the Betsileo the highlands west from the National Park (Peters 1999). As the topography of the eastern region is very steep, fertile low land for rice paddy is limited making traditional upland slash and burn method (*tavy*) very important for local food production. *Tavy* is also an important part of the Tanala culture and *fombandrazana*, the "way of the ancestors". The Betsileos on the western side of the park seldom practise *tavy* due to the less steep landscape. They also tell that the forest area is increasing since their ancestors stopped burning practices.

4.4.1 History of RNP

RNP has a core area that is meant to be strictly preserved for biodiversity conservation, and where human impact is minimised. This core area is surrounded by a buffer zone which can be used for different purposes, namely eco-tourism, research and habitat restoration (MNP 2014). The buffer zone also serves as a protecting shield around the core areas of the park. The 2.5 km wide buffer zone is controlled by the Chef Forestier who works in collaboration with Madagascar National Parks (MNP) who manages all national parks of the country. Both the Chef Forestier and MNP operate under the Ministry of Environment and Forests.

The RNP project (RNPP) started with the discovery of the Golden Bamboo lemur, a species that was thought to have gone extinct. The species was discovered in the Ranomafana area in 1986 by a primate researcher group led by Doctor Patricia Wright (Korhonen 2006). The RNPP was thus established in 1991 as an integrated conservation-development program (ICDP) aligned with the national Environmental Action Plan (Peters 1998; Hanson 2012). It was funded by USAID, organized by two U.S. universities, and authorised by the Malagasy government. The project's six components were park management, biodiversity research, ecotourism, conservation education, rural development and health. Environmental awareness raising (or "sensibilisation" in French) is an important part of the community outreach program that began

with RNPP and continues to be implemented by the ValBio Research Centre located within RNP (Hanson 2012).

In 1997 the RNPP tasks were shifted to ANGAP (*Association Nationale pour la Gestion des Aires Protégées*), responsible of park management, conservation education, rural development and promotion of ecotourism, and MICET (*Madagascar institute pour la Conservation des Ecosystemes Tropicaux*) facilitating biodiversity research and health projects (Korhonen-Kurki 2006). Later, ANGAP changed its name to Madagascar National Parks (MNP).

Despite the great amount of effort and funding put into development of rural communities – as well as various benefits brought to the local economy (Wright & Andriamihaja 2003) – the ICDP of RNP has been much criticized (Hanson 2012). The main critique concerns the centralised planning that lacked the effort to understand or address the local social, cultural and economic conditions and people's ties to the land (Hanson 2012; Peters 1999). Peters, the Conservation Technical Advisor to the RNPP, describes the creation of the national park as a confusing event for the 160 local villages: many of the remote villages around the park remained unvisited by government agents and few of them were aware of the creation of the park, let alone its purpose or meaning (Peters 1999). Many thought that it was another attempt by foreigners to steal their land. The initial conservation approach lacked any official recognition of resident peoples' rights to self-determination, as well as any public debate, and these shortcomings exacerbated the already marginalised position of rural communities (ibid.). The inability of conservation authorities to address these and other socio-economic issues arising from conservation at the local level and to adapt to contextual changes (i.e. in laws, policies, and socioeconomic forces) inhibited the success of Ranomafana ICDP (Hanson 2012). Development activities that have followed the initial ICDP model have not been successful, as development projects are imposed by the conservation authorities and local participation remains low (Korhonen 2006). The ideology behind the activities or personnel implementing them has not changed from ICDPs (Korhonen 2006; Hanson 2012).

4.4.2 Historical impacts of conservation

The main benefits of conservation for local communities are ecological: watershed protection and favourable micro-climate (Kari & Korhonen-Kurki 2013). The restrictions however have caused a substantial decrease in household income (Ferraro 2002) meaning that ultimately it is the rural and already food-insecure communities that end up paying the highest price for global conservation benefits (Kari & Korhonen-Kurki 2013). However, Ferraro observed in 2002 that relative to the national and global benefits, the costs borne by local people are relatively small

and that the imbalance should not be impossible to rectify with proper conservation planning. Since 1993, attempts were made to compensate the local losses resulting from conservation with the 50 % DEAP (*Droit d'Entrée aux Aires Protégées*) system (Lappalainen 2002). According to the system, half of the entrance fees of the NP were given to local community development initiatives, such as for the building of schools or health clinics (MNP 2014). This system was suspended in 2009 due to the financial difficulties of MNP and the sudden decrease in the number of tourists, due to national political unrest. The MNP (2014) estimates the success of these community projects financed by 50 % DEAP to be rather low.

The protected area system has also failed in securing land tenure for peasants of Ranomafana region who have been threatened by continuously changing legislation (Peters 1999). Participating in ICDP activities has had no subsequent economic success of the villagers, nor has it created incentives for villagers to diversify their land use or better manage their forest resources (Korhonen-Kurki 2006; Peters 1999). Ecotourism has provided employment only for a few, having little effect on local livelihoods (Sarrasin 2013). Local people continue to depend on subsistence agriculture and forest products they are able to collect, often illegally (Kari & Korhonen-Kurki 2013). Meanwhile, the fast population growth continues to increase the pressure on land and resources, with cultivations expanding to new areas, except where no longer possible due to imposed park borders.

The local rural population of RNP continues to struggles in the face of poverty, poor heath, malnutrition, lack of education, and inefficient and inappropriate agricultural methods (CVB 2013). Local people recognize the problem of population growth and worry that they will be facing a food crisis in the future (Uotila 2013). RNP has indirectly had a negative effect on people's health due to declined purchasing power for medicines (Korhonen 2006). Health in remote villages in RNP was found to be poorer than in Ranomafana centre and along the main road (ibid.). Although decreasing the number of children has been one of the central goals of local health programs, this has not translated to the villagers as, on the contrary, reproductive health has worsened since the establishment of the RNP (Korhonen 2006).

The conservation rules that have restricted assets such as cultivable land and banned traditional livelihood activities (*tavy*) have hit hard, especially for those who are already in a weaker position: i.e. the remote, landless, and asset-poor peasants (Korhonen 2006). Long-term vulnerability threatens to push these people further into the margins of society, with development projects doing little if anything to improve their situation. This increasing vulnerability and inequality may partly have contributed to the wider social change of

weakening the *fokolona* (informal community institutions) which to date has been an important form of social capital offering people security during hard times.

According to most accounts (Korhonen 2006; Peters 1999; Hanson 2012) the attempt to integrate conservation and development has in reality had the opposite effect: the conservation goals and the needs of the local people seem to be in ever deeper contradiction. Biologists and national park personnel find the local practices of *tavy*, forest grazing, and natural resources extraction as the most severe threats to biodiversity (Peters 1999). Meanwhile, local vulnerability has increased and traditional institutions of natural resource management are breaking down – both processes accelerating unsustainable land-use practices, thereby forming a vicious cycle.

4.4.3 National park co-management

The MNP Strategic Management Plan for the years 2014–2024 envisions a range of ways in which the PAs are to bring benefits to the local economy (MNP 2014). Community development projects address issues from private sector development to education and health, and are defined as a part of co-management and promoted by MNP's partner organisations. The main source of direct financial benefits that local communities can get from conservation are salaries paid either for stable local employees of MNP or occasional paid labour of community committee members (*Committee Locale de la Protection*, CLP) in different tasks such as patrols, ecological monitoring, and trail maintenance (MNP 2014). Other sources include fees paid by tourists to guides and possible micro-project funds. The Strategic Management Plan envisions also new sources of income in development of local businesses supported by MNP and private sector development specialists and concentrated mainly in tourism services or production of cash crops. "Social compensation payments" or "social and environmental safeguard plans" (PSSE) are referred to as a source of income for local communities (MNP 2014). A social safeguard plan compensating the lost resources for local populations is required from all protected area initiatives in a 2003 directive by the Government of Madagascar. However, its implementation is not further discussed in the Strategic Management Plan.

The MNP Strategic Management Plan for the years 2014–2024 presents that co-management has been used as the approach of MNP for more than two decades. Co-management is defined as collaborative management of parks with representative bodies (*Comité d'Orientation et de Suivi des Aires Protégées*, COSAP) of which the majority of members should come from local communities (MNP 2014). Governance of each national park should integrate local stakeholder interests, and the local communities should be regarded as the primary stakeholders of

conservation. The progress in co-management is measured with following indicators in the Plan:

i) Percentage of COSAP members representing local communities.

ii) Percentage area of the protected area patrolled by CLPs.

iii) Percentage of protected area boundary abutted by community-managed natural resource areas.

iv) Direct financial benefits accrued by neighbouring populations (MNP 2014).

These guidelines for cooperation with local communities define the ways conservation authorities are supposed to build a partnership with local communities after the decades of top-down conservation. In chapter 6, these arrangements are compared with the results of the analysis of the field data in order to enlighten the ways they are experienced by and effects they have on local communities.

5. Field-level data collection

The field work was conducted in November – December 2014 in Ranomafana region and was funded by the Madagascar project of the Global Change and Conservation team from the University of Helsinki, who also held an exchange field course titled "RESPECT" (Reserve Planning in the Tropics). The RESPECT course conducted three focus groups in one of the villages of this study, which provided some data also for this research. Before the expeditions to the villages, I tested my questions in the village of Ambodiaviavy, where a focus group was conducted. The five study villages were chosen based on logistical, temporal, and safety limitations – no statistical sampling based on e.g. the distance to RNP or other criteria was possible. Two to four days were spent in each study village as well as one afternoon in the village of Ambatolahy. The research group consisted of a minimum of three and maximum of six researchers and a guide from CVB who facilitated the research team's entry and stay with local communities and related practicalities.

5.1 Methods of data collection and analysis

Methodologically this research draws from qualitative ethnographic approaches. Qualitative methods are used when the goal of research is to understand the world through interpreting the actions, perceptions, and meanings of its actors (Brockington & Sullivan 2003). Importantly, these understandings are created in interaction with the actors and context of the research; the

researcher does not try to stay as an objective outsider and observer but seeks to participate and empathise with the researched. Qualitative research goes beyond numbers and quantitative findings to find out the subjective experiences and meanings given to and impacted by social structures (ibid.). Accordingly, in this case study, the residents of a few specific villages scattered around the PA are talked with about their subjective experiences and perceptions of conservation policy and natural resources management at the local level in order to create a wider understanding of the impacts of conservation policy on local people's agency and involvement in conservation. The aim is to create information for conservation planners on how to enhance co-operation with local communities at least in Ranomafana and Madagascar.

Qualitative data collection methods include e.g. participant observation, interviews, and group discussions, providing data for analysis with methods varying from discourse analysis to qualitative content analysis (Brockington & Sullivan 2003). The data obtained with qualitative methods is usually in the form of quotations (interviews), descriptions (observation), and excerpts of documents which are employed to create a narrative description (Genzuk). Qualitative research tends to inductively build theories from observations rather than test theories. The quality of qualitative research is assessed e.g. by the *completeness* of descriptions, *saturation* of categories, and *consistency* of interpretations by different researchers in similar cases (Seale et al. 2004).

Ethnography has been developed by sociologists and anthropologists to study people's experiences of everyday life, emphasising social and cultural processes that should be studied in their unique time and space (Crang & Cook 2007). The important, critical observations in the evolution of ethnography include, firstly, that cultural structures would somehow exist independent from the everyday actions where they in fact are produced, reproduced, and transformed. Similarly, the people being researched cannot be expected to have only one cultural identity similar to the others in the same social group. And finally, the interpretations of individuals and cultures cannot be drawn by a researcher, apparently detached and objective describing a culture or a social group as a homogenous entity. Ethnographic research offers the possibility to acknowledge all these complexities of the inconsistent, contradictory, and messy social world understanding that "*research on social relations is made out of social relations*" (Crang & Cook 2007: 9). Engaging with the messiness of the real world and recognising ambivalence and inconsistency as real and important rather than trying to find a single truth and simplifying social world in neat theories is one of the strengths of ethnography in trying to understand human behaviour (Crang & Cook 2007: 14). This cultural sensitivity of the

researcher makes the ethnographic approach especially applicable in an environment and culture unfamiliar for the researcher.

The field-level data collection methods of this research include semi-structured interviews with residents (n=44) and key informants (n=5) of the study villages, village meetings (n=5), focus group discussions (n=3), observations, and expert interviews (n=5). The interviews and group meetings were conducted in Malagasy with the translation carried out principally by the research team's assistant Tafita Rakotoarimanana with frequent help from Maria Hariniaina, two Masters Students from the University of Antananarivo. With the help of two common languages (English and French), the communication between researcher, translators, and informants flowed well. I was not able to record the interviews but thanks to the fluent French in which the interviews were translated and the extra time for writing while the next questions was translated in Malagasy, I had time to write whole sentences and include details in my notes. After the interviews I was able to ask for any necessary clarifications from the translator and we could discuss the problems of interpretation. Some difficulties in translation were identified and the impact of these minimized, including some data having to be dropped due to being too unreliable.

Asking for a free prior informed consent (FPIC) from the potential participants of any research is an increasingly common procedure carried out principally for ethical reasons (Brockington & Sullivan 2003). Free prior informed consent means that a person has the right to decide whether or not they want to take part in a research project once they have been informed of the aims and processes of the research project, how the results will be used, and who will be able to access them. The researcher must provide this information to the possible participants who must be able to ask questions or withdraw from the research at any time. The consent can be obtained in written or oral form. It must also be remembered that following such predefined protocols does not mean that no ethical problems will arise as the research process evolves. Dealing with ethical issues requires both awareness and flexibility throughout the process. In this case, a research permit was requested before arriving to the village and in the village meeting in the beginning of the visit we introduced ourselves and our research plans and asked for consent of the villagers to participate in our research. Each individual interviewee was asked for their consent, and we explained the voluntary nature of participation and anonymity of any information published.

5.1.1 Village meetings and focus groups

A focus group is a group discussion around a pre-defined topic the purpose being to learn from the ways in which people discuss in addition to the information on the topic itself (Brockington & Sullivan 2003). The logic of using group discussions is to find out how people act in social contexts, i.e. how they discuss their experiences and thoughts in an interaction with other people (Crang & Cook 2007). The challenge of group discussions is whether a researcher is able to understand the group dynamics. In this research, this problem was inevitable due to the foreign language and culture and therefore the meetings were used principally to get an idea of the general, public perception towards the National Park and forest conservation and to identify the main issues in the concerned villages regarding conservation and use of natural resources that could be further discussed in individual interviews.

Figure 2. Village meeting in the school building of Amboditanimena

Arriving in each of the five villages, the first thing carried out was a village meeting, the purpose of which was a mutual introduction and asking the consent of the villagers to participate to our researches. In Tanala villages the king of the village was always present and performed the required rituals. In the village meeting I could also pose some general questions. In most village meetings, many people came and participated in the discussion. In one village, three focus groups were conducted by "RESPECT" field course with men, women, and elders separately. The objectives of the focus groups were to gather information on the social-ecological changes, to explore the establishment of informal institutions governing the use of wildlife, and to understand the local perceptions towards conservation. A separate village meeting was not

necessary or even possible due to time limitations, but I was able to follow one focus group discussion and get notes and oral descriptions from the other two.

5.1.2 Semi structured interviews

Interviewing is a key method of qualitative data collection (Crang and Cook 2007: 60–89). It fits well as a method in this research as interviews enable the researcher to gain understandings of the experiences, meanings, and subjectivities of the informants as discussed by themselves and, importantly, with the researcher. A conversation between the interviewee and myself allows for constructing intersubjective understandings of the meanings they give to rules, events, and social relations related to conservation and natural resource management; the type of information that cannot be 'extracted' and understood without a meaningful involvement of the researcher.

Semi-structured or in-depth interviewing is often used in ethnographic research because it is a more flexible method of data collection than predetermined questionnaires (Crang and Cook 2007). A checklist of key topics predefined with background research is used to ensure that no important topic is forgotten to discuss and that there is some equivalence across all the interviews (ibid.). The extent to which each topic is discussed and which features emphasised, however, remains the choice of the interviewee, which gives some power to the interviewee in this type of inquiry that otherwise might easily repeat the existing power structures (ibid.). In this case, the literature review indicates to a strong top-down governance and the blocked communication from local communities to authorities and conservation personnel and in order to break this obstacle the attempt was to try to understand the local realities by letting as much power as possible to the interviewees and following along with the shifting topics of the conversations.

In this type of approach the creation of trust and sufficient sensitivity are fundamental (Crang and Cook 2007; Silverman 2005). In order to get insights to the everyday realities, perceptions, and experiences of the interviewee, trust must be created. Especially in the case where the research topic itself is relatively sensitive, it cannot be assumed that people want to share their true opinions and experiences with an outsider who might even be working for the local authorities (Crang and Cook 2007). Another issue is the skills of the researcher to read the discussion, ask the right questions at the right time, and be patient and aware of the whole situation (Crang and Cook 2007). This includes cultural awareness: questions such as how to approach people and what is appropriate to ask. While careful preparation is important, it is both an advantage and challenge of the method that the discussion can change to any direction

as new topics arise, new people happen to join the conversation, and so on. The checklist of questions can be continually modified according to new information that is accumulated (ibid.).

Household interviews

I visited in total 44 houses in the study villages and interviewed at least one adult member of the household. The houses were selected randomly but from each part of the village as sometimes the houses were scattered. No other specific selection criteria was employed as many houses happened to be empty or sometimes their residents were too busy or unwilling to participate. The women were easier to meet because the men spent the days usually working at the fields while women stayed home. This study has no significant gender perspective but, nevertheless, it was ensured that the data is not biased in this sense by trying to get as equal amount as possible of male and female informants. I asked key guiding questions from my thematic checklist and let the interviewees talk themselves as much as they were willing to, with my involvement in asking further questions only when sensed as useful, e.g. for trying to dig as deep as possible into the issues they viewed as important. The interviews took approximately 20–40 minutes each, although on a few occasions they lasted almost an hour as the interviewee had so much they wanted to share.

Themes discussed in the interviews include the following:

- Social-ecological changes that have occurred in the area (discussed with older interviewees)
- Impacts of RNP on the interviewee's life
- Perception of RNP
- Involvement in development projects and community associations
- Perception of development and conservation projects
- Rules (formal and informal) and actors related to conservation and natural resources management
- Perception of conservation (benefits, negative effects, possible internal and external conflicts)
- Livelihoods, agricultural methods

Key informant interviews

In each village I interviewed a key informant, a person who was respected in the village and who had wider knowledge about the events of the village and who could explain the relationship with authorities and other external actors. Usually the key informant was identified in the

village meeting and in some villages I had several chances to talk with him and ask further explanations to things that had come up in household interviews. I also used the same themes with the key informants as in household interviews.

Expert interviews

In addition to the data collection in the villages, different experts were discussed with in order to gain a wider understanding of the interplay of actors involved with conservation as well as to enlighten local cultural and political context. The expert interviewees and the purpose of the discussions are presented in Table 2.

Table 2. Summary of expert interviews.

Date	**Organisation and position of the interviewee**	**Purpose of the interview**
6 Nov 2014	CVB, Coordinator of Monitoring and Partnerships Department	Introduction to the area, current events and conflicts
10 and 25 Nov 2014	CVB, Coordinator of conservation education & Outreach Department	Environmental education and agricultural training programs of CVB; Cultural challenges of conservation
26 Nov 2014	Ranomafana National Park, Director	Policy of RNP, RNP's relation to local communities
26 Nov 2014	Association of Guides of RNP (*Association des Guides de RNP*), President and a Member	How does the RNP benefit local people?
28 Nov 2014	Gendarmerie of Vohiparara, Chief officer	Cooperation of gendarmerie with MNP and local associations The quality and quantity of illegal activities

All but one were individual interviews; two people (the president and a member of the association) were interviewed from the Association of Guides of RNP. The interviews took about 30–60 minutes and they were conducted in the workplaces of the interviewees except one in the home of the interviewee. Only the interview with the Gendarmerie was translated to

Malagasy, others spoke either English or French. Each interview had a slightly adapted list of questions due to the very different roles of the stakeholders, and new topics and questions emerged during the interviews. Some questions were rather sensitive and I did not get answers to all of them. The expert interviews are used as complementary information for the analysis.

5.1.3 Observation

Observation is a key method of ethnographic research because it allows the researcher to experience living within the community and culture and experiencing the everyday-life realities that are the focus of the research. The verb "observe" has a connotation of external monitoring whereas "participatory observation" refers to be embedded in the life of the researched community as intimately as possible and feel what it is like to be a part of the group (Genzuk). However, Genzuk argues that this is not a clear cut division or even a choice that a researcher can necessarily make: the extent of participation is a continuum in which it is possible to engage in "doing" and sometimes only watch what others do. While the amount of time spent in the research site tends to determine how deeply one is able to participate, Crang and Cook (2007) point that also a short period of observation can produce valuable understandings to contribute to the analysis. In this research, the time spent in the field was limited and not entirely determined by the researcher, meaning that the experience of what it is like to live for a prolonged time in the community was not possible. Nonetheless, although short, the time spent in the villages, planting rice, interacting with people, and seeing them interact among themselves, contributed to a fuller understanding of some of the realities and constraints of local life.

5.1.4 Summary of the data

The summary of the data gathered in Ranomafana region is presented in Table 3. All the data is mainly qualitative except some figures from the documents of the outreach program of CVB which are only used as general background information. Household interviews are the principal bulk of data complemented with the views from the various group meetings and key informant interviews, and observation that further enlighten local perceptions and dynamics between actors. Expert interviews were used to understand the context of the case study and the viewpoints of different actors more broadly.

Table 3. Summary of the data gathered in November–December 2014.

Method	Sample size	Data type	Purpose
Household interviews	44	qualitative	Local perceptions on RNP, forest, livelihoods, socio-ecological change, development projects, environmental laws, relationship with authorities
Village meetings	5	qualitative	Meeting the villagers, introducing myself and the research, important issues in the concerned village
Key informant interviews	5	qualitative	Conservation initiatives in the community, relationship with different authorities
Focus groups of "RESPECT" field course	3	qualitative	Perceptions of conservation in the village of Ranovao
Expert interviews	5	qualitative	Viewpoints of different actors involved with conservation
Documents of CVB Outreach program	Annual reports 2006, 2010	qualitative / quantitative	General information of the villages, number of habitants. Additional information on environmental and socio-economic conditions of the villages.
Observation	continuous	qualitative	Complementing understanding of the way of life and spatial context, verifying interviews (incl. planting rice, walking around cultivations and community forests etc., spending time in villages)

5.1.5 Qualitative content analysis

The data gathered in the study villages was analysed using Qualitative Content Analysis (QCA). QCA is a useful tool for analysing a large amount of qualitative data, as it allows for a systematic way of organising the data for grasping what has been said about the topics in question, and by this process moving into a more abstract level of interpretation (Schreier 2012, Bazeley 2013). Coding is a fundamental function of QCA (Bazeley 2013). It is a process of sorting and arranging the data by interpreting its meanings. This makes it possible to manage the data and access the evidence. The coding process also stimulates thinking and helps to build ideas from the data.

Codes can serve many purposes: they can be descriptive, topical or analytical (Bazeley 2013). All three code types were used in this analysis; codes were used to label the topics discussed, the attitudes and meanings associated with these topics, and more analytical remarks or conclusions made on the data. As a code was applied to new paragraphs of the transcript, the already coded text was reviewed to make sure that the idea of the contents match. Writing memos on the exact definitions of the codes helped distinguish them from each other and pushed forward the process of analytical thinking. In the end the whole dataset was reviewed several times by repeatedly splitting and combining different codes. This revision process lasted throughout the analysis and broader categories of codes and more conceptual understandings started to emerge. The final number of codes turned out to be 181, which in turn were arranged under 23 broader themes and further elaborated in the next chapter.

In this case, data collection set out initially from a predefined list of specified themes to be discussed. The analysis, in turn, attempted not to follow a set of topics predefined in the theoretical framework but rather to sort out what exactly emerged in the data itself. The aim was to understand what the important phenomena related to conservation are in the realities of local communities. I would argue this approach to have had certain benefits in this type of question setting: following the stories told by the interviewees and systematically coding all topics opened an understanding for a wide range of overlapping and sometimes contradictory actors, norms, rules, events, and attitudes related to conservation and especially to natural resources management and land struggles at large, not only related to the protected area management (see especially Chapters 5.2 and 5.3). QCA also served well for bringing up the *variety* of meanings held by informants rather than counting frequencies and emphasising the importance of topics that were mentioned most times.

5.2 Study area

The attempt when choosing the study villages was to get both Betsileo and Tanala villages and degrees of remoteness to RNP and to Ranomafana village, the administrative centre. However, no statistical sampling could be performed because the villages were chosen based on logistical, temporal, and safety limitations and some of the planned villages were changed during the fieldwork as the conditions changed. For these reasons, the most remote northern and southern villages were not reached and therefore this research does not ultimately provide for any comparisons related to distance to the RNP or administrative centre.

Representativeness of the villages in terms of involvement in the governance of the PA is perhaps difficult to assess. In qualitative research, however, the value of the research is not

measured by the quantity of the data or statistical logic of sampling but the quality and positionality of the information that the participants of a research can offer and quality of interpretation from an often small number of cases (Seale et al. 2004; Eskola & Suoranta 1998; Crang & Cook 2007). What is significant is the findings about *the nature of a process*, and whether this can be generalised is not solely a question of the amount of units of data collection (Seale et al. 2004). Saturation, the point when no new answers emerge in interviews, was reached in two of the study villages when there was enough time for many interviews. For this reason, the data gathered in all the villages is analysed mostly as a unit with only some comparisons. In the end, however, each village is distinct, each with a different cultural and spatial context, containing a range of actors and narratives, and capturing this heterogeneousness concerning conservation and PA management is one of the goals of this study.

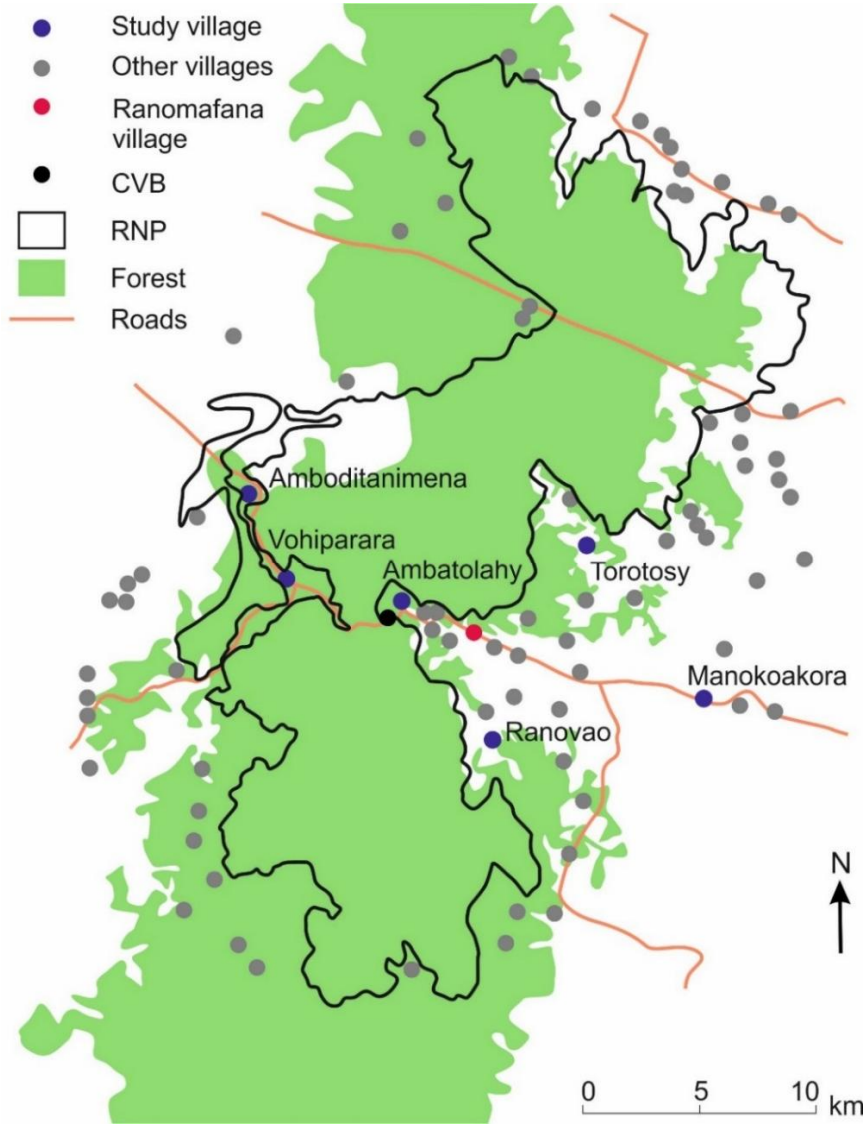

Figure 3. Study villages around Ranomafana National Park.

The locations of the study villages are indicated in Figure 3. The five main study villages are Manokoakora, Amboditanimena, Vohiparara, Ranovao, and Torotosy. An additional study village is Ambatolahy where only a village meeting was held but the data of which were included in the analysis. Although the PA separates the Eastern and Western villages from each other, local people can still travel through it on foot or by the main road. ValBio research centre (CVB) and the village of Ranomafana are located along the national road 25. Ranomafana village is the administrative centre of the region, where the offices of MNP, the mayor, and many NGO's are found. All nature tours are booked in Ranomafana, providing for many business opportunities and hence also an increasing number of services, like restaurants, hostels, and souvenir shops in the centre of the village.

Table 4 presents the main characteristics of the study villages and a short description of what kind of forest is closest to each village, further discussed below.

Table 4. The main characteristics of the study villages (Number of habitants, CVB 2013)

Name	No of habitants	Social group	Nearest forest
Manokoakora	550	Tanala	No forest near the village
Amboditanimena	240	Betsileo	Located at RNP border, no buffer zone
Vohiparara	325	Betsileo	Community-managed forest
Ranovao	341	Tanala	Buffer zone
Torotosy	286	Tanala	Buffer zone
Ambatolahy	265	Tanala	Buffer zone

The villages of Amboditanimena and Vohiparara are situated at the western side of the national park, some five kilometres distance from each other along the bank of the river Namorona. The residents of these two villages belong to the Betsileo cultural group, as do the majority of the population of the highland plain west from the national park. The population of Amboditanimena is approximately 240 and the number of households 40 (CVB 2013). Vohiparara has approximately 325 habitants (70 households). Both villages have primary schools. Amboditanimena and Vohiparara are surrounded by the protected area: Around the houses, after rice paddy cultivations one can see rainforest in every direction (Figure 4). Vohiparara is the only study village that has a community-managed forest. It is 25 hectares in area and the villagers use the forest for gathering, collecting wood for fire and construction, and for cultural rituals. The majority of the residents of Amboditanimena and Vohiparara are

farmers cultivating rice paddy and other crops. Traditionally these Betsileo villages use their surrounding forests in diverse ways gathering a range of non-timber forest products, such as crafts materials, medicinal plants, and crayfish. The villagers tell that *tavy* was never a traditional practice on this highland side where there used to be plenty of wetland for rice paddy.

Vohiparara is the nearest market for the residents of Amboditanimena, and the other frequently visited market is in Ambalakindresy, eight kilometres north. The national road 25 crosses both villages and Vohiparara is a stop for Malagasy and sometimes also international travellers and has some small businesses such as restaurants and kiosks. Fried crayfish are sold to passengers on large plates in Vohiparara whereas in Amboditanimena hunting crayfish for sale is a *fady*. Just near both villages are entrances to the national park used by tourist groups. This does not however bring employment or income to the villages as the tours are booked in Ranomafana village.

Figure 4. The border of the National Park surrounds the village of Amboditanimena

In both Amboditanimena and Vohiparara, CVB has conducted a health and hygiene program and an environmental awareness raising for school children. There is also a conservation club of selected members in Amboditanimena. An agriculture development project called Tany Maitso (a development co-operation project of the Finnish NGO "Dodo ry") has worked in the village for many years teaching e.g. vegetable cultivation. However, the villagers tell that in

recent years there have been few activities and they have lost confidence in Tany Maitso personnel.

Recently, insecurity has increased along the western side of the national park (CVB, Coordinator of Monitoring and Partnerships Department, *personal communication*). Banditry, which has roots in the Betsileo cultural tradition of cow robbery (Korhonen 2006) has taken on a more violent form. In Amboditanimena, doors are locked when the sun goes down and no-one goes out for fear of bandits. The village is believed to be protected by a chosen member of the villagers who by the use of magic is able to prevent bandit attack. In Vohiparara, where the rural police (the gendarmerie) have an office, the situation is much calmer. However, there have been strong tensions and open conflict situations between many of the Betsileo villages and the RNP about gold mining inside the protected area. This has led to the breaking up of relations between the villagers and conservation authorities who see it too unsafe to go to the villages. Meanwhile, the Tanala side of the national park is not reported to be as insecure as the Betsileo side, although some incidences were reported: at the time of fieldwork, one of the southern villages was attacked by a group of gold miners coming from outside the area forcing the residents to abandon the village.

Figure 5. Burned slopes near Torotosy

Figure 6. Path to the eastern villages

The Tanala villages west from the national park are Ranovao, Torotosy, Ambatolahy, and Manokoakora. Torotosy and Ranovao are both a couple of hours walk away from the road –

Ranovao to the south and Torotosy to the north. The landscape on the eastern side varies a lot from the west. The paths of red and golden mud go up and down the hilly landscape of rice paddies in valleys, terraces and freshly burned black patches on slopes, lines of planted eucalyptus trees, bushes, and secondary forest (Figures 5 and 6). Both Torotosy and Ranovao are near the national park border and the buffer zone around it consists of forest fragments. The communities do not have the authority to manage these fragments or cut wood without permission from the Ministry official, i.e. the Chef Forestier. The wood is needed nevertheless, and one can hear the distant sound of an axe echoing in the forests and see little clearings here and there.

Figure 7. Cultivations around the primary school of Ranovao

Along the paths to Torotosy and Ranovao one passes a couple of other villages and sees how close these communities are to one another. Ranovao in fact consists of two separate villages: Ranovao Haut higher on a hillside and Ranovao Bas in the valley. Ranovao Haut has 81 habitants in 16 households and Ranovao Bas 260 habitants (52 households). Ranovao has a primary school building (Figure 7) but it shares only one teacher with another community nearby. The population of Torotosy is 286 (48 households). Torotosy has a primary school but the members of the community state that they would want also a secondary school in the village. These villages produce rice, bananas, and other agricultural products also for sale. In Torotosy, breeding is an important livelihood which seems to contribute to the relative wealth of the community. The key informant in Torotosy explains that the ones who have fields large enough to produce rice for sale and who breed pigs are better off – but not all in the village have such means or wealth. Indeed, already from the appearance one can see to the relative wealth of

Torotosy: its repaired village path, its slightly bigger and neatly aligned houses, and all children with proper clothes (as opposed to ragged), signalling better living standards than in many other Tanala villages I came across.

In Torotosy, there has been an incident that has caused a lot of prejudice towards any outside intervention or development project. Almost all the interviewees refer to a scam that happened two years ago when a development project came promising agricultural training and materials if the residents made an inventory of all the things they felt they needed, and signed the inventory as members of an association. This included a membership fee and other paperwork expenses, never to hear or see of these outside visitors again. Many people tell that they are not sure if it was MNP, the commune, or someone else who initiated the project and betrayed them, and they are seemingly distrustful towards outsiders. Later we heard from the mayor of Ranomafana that the commune was involved with the "pretense" project, but got scammed like the villages. CVB has ended all its activities in Torotosy and has not worked there in recent years. In Ranovao, CVB has conducted activities aiming at improving health and hygiene as well as awareness raising in the school, but also in Ranovao there have been problems of trust between CVB personnel and the villagers.

Manokoakora is the only one of the study villages that is not directly at the border of the national park. It is about 10 kilometres away, along the main road from Ranomafana village. Manokoakora is included in the analysis because it has a rather close connection to MNP: The village authorities of Manokoakora were consulted in the creation of the park and the village has received financial compensation for the protected area. Furthermore, the outreach program of CVB has many health and hygiene activities there and has offered cyclone relief to the village.

Manokoakora (Figures 8 and 9) has approximately 550 habitants (116 households). Children and youth of Manokoakora go to school in Kelilalina, a bigger village about one kilometre away along the road. There is also a high school where the students engage in a reforestation program. The people of Manokoakora are mostly cultivators although other sources of income are sought for, e.g. temporary employment in towns. There is an active community association in the village that has been founded in 2001. It is a subdivision for the communal association Koloharena that works in cooperation with the Ministry of Environment and Forests and gets funding from MNP. The objective of Koloharena is environmental awareness raising and education of the population. The activities include reforestation and teaching fire protection, and new rice cultivation techniques. Only villagers who own land can join Koloharena, meaning that most of the members are adult men. The person responsible of Koloharena in Manokoakora

is a respected and influential person in the community, who also states that his authority prevents the villagers from breaking anti-fire laws.

Figure 8. Women of Manokoakora fetching water

Figure 9. A gathering in Manokoakora

Ambatolahy is located in a very hilly landscape inside the rainforest, only about a kilometre away from CVB. While most of the village's 265 habitants (58 households) are cultivators, a significant number of them have gotten employment as MNP or CVB personnel or as tourist guides. In recent years, Ambatolahy has received cyclone relief from CVB and a conservation club has been formed with the villagers.

6. Results

6.1 Social impacts of RNP

6.1.1 Displacements

Spatial restrictions caused by the national park concerning natural resources use were discussed in 32 interviews and all village meetings and focus groups. The current conservation strategy prohibits all other activities in the protected area except walking and zebu pasture (this has been agreed so that the children would be free to attend school when they do not have to tend zebus to keep them away from cultivations (as told by a Member of the Association of Guides of

RNP)). The traditional livelihood activities, such as gathering food, medicinal plants, and products that can be sold as well as logging wood for construction and fire, have been criminalised inside the limits of the national park and are also restricted in the buffer zone. This has resulted in a decrease in household income which affects for example the families' ability to send their children to school. The main concern for the residents of the region is that the existing fields are feared not to be able to produce enough food as the village population continues to grow.

> *"The creation of the RNP did a lot of harm to this village. It decreased the income in each household. The cultivable area diminished, honey and crayfish cannot be gathered anymore. We have no money to send our children to school."* – Woman 24, Amboditanimena

The impact of conservation varies in each village. Manokoakora is the only village where the RNP seems to play quite a small role because it is also the only village not bordering the national park. 5 out of 20 interviewees in Manokoakora do not even know its existence and 7 know only the name but cannot tell anything more about it.

The most striking example of land struggles was seen in Amboditanimena where forced eviction took place a decade after the national park was created. The people of Amboditanimena used to have rice paddy in the valleys inside the forest in the area that is currently a part of the national park. When the park was established they were promised that they can continue cultivating in the 2,5 km wide buffer zone as long as they did not clear any forest. One key informant tells that years later the promise was broken when as a part of the national act of tripling protected areas the gendarme came to evict residents from the area, and now the village has no real buffer zone separating it from the national park. A woman from Amboditanimena describes the event:

> *"The problem is that the RNP denied us to cultivate the low land inside the park. Before people of Amboditanimena had a lot of land on hills but they sold this to get the land in the area where the park is now. Then the majority of the population lived inside the forest and cultivated the low wetland there. But the RNP came and sent the gendarmerie to chase us away from our houses and fields. Gendarmes came with guns and did not give us time to gather our belongings; we had to leave everything in our houses. After this the gendarmes robbed all in the houses: the little blankets and whatever small items the already poor people had managed to acquire during years. This is the reason that there are so many bandits nowadays and the village is a part of the "red zone". The ordinary*

people are deprived of their only livelihood and possessions and they understand that the law is not on their side but against them." – Woman 24, Amboditanimena

A few remarks must be made when reading this story. If the interviewee told her age correctly she must have been around nine years old at the time of the evictions and thus she must be repeating the narrative discussed among the villagers – not only her own experience. Also, banditry has cultural roots in Betsileo culture and cannot be explained only as a reaction to repression by the authorities (See e.g. Korhonen-Kurki 2006: 44). True or not, the existence of these kinds of narratives shapes the way MNP is seen by local communities affecting their actions.

6.1.2 Social impacts of MNP's co-management efforts

Table 5 presents the four components of co-management defined by MNP. Based on the interview data, it describes how these components can be seen at the local level, by what the interviewees have told, and what kinds of social impact result from the way these components are implemented. Each component will be discussed separately in following chapters.

Table 5. Components of co-management and related social impacts

Co-management component	Description	Social impact
Protected area boundary abutted by community-managed natural resource areas	The majority of the communities do not have management rights to their forests	Implications on social organisation and community-institutions
Direct financial benefits accrued by neighbouring populations	Development projects and compensation are punctual and unequally distributed	Recipient role, passiveness No sustainable improvements, disappointment, mistrust
	Business opportunities in eco-tourism centralised in Ranomafana village	Eco-tourism benefits only small portion of population and creates few business opportunities anywhere else than in one village
	Employment is offered irregularly and payments do not come on time	Indicates lack of respect for the workers

Protected area patrolled by CLPs	Tensions between CLP members and people of the same or neighbouring communities.	Insecurity, further social marginalisation of the poorest villagers
	Employment is unreliable and irregular	No partnership
Community participation	No public participation in decision-making	NP is viewed illegitimate, negative attitudes, passiveness

6.2 Natural resources management at the community level

As described above, Amboditanimena has no community-owned forest and no buffer zone separating it from the national park, and Manokoakora does not have any forest nearby.

Vohiparara is the only study village that has a community managed forest. In Vohiparara the village chief has the formal authority to control the use of the community forest, but according to a key informant, management is mostly based on social control: if someone takes more than needed others tell him/her to stop. Only honey and crayfish are gathered to be sold, but the crayfish population in the community forest is so young at the moment that villagers have paused catching them. The key informant tells that he thinks that the whole life of the village depends on their forest.

In Torotosy and Ranovao people can gather forest products and construction wood in the buffer zone if they get a permission from the Chef Forestier. In Ranovao, the process is described as difficult and expensive. One interviewee tells that a permit costs 60.000–100.000 Ar. (around 20–32,00 USD) but people manage to pay it because it is the only way they can get wood. In the village meeting in Torotosy, I was told that the forest area at the border of the park can be used by the villagers, but they do not use it because they are so afraid of the Chef Forestier. Later, it became evident that some wood is being used and sometimes forest is slashed and burned illegally to create new fields. No community rules or norms concerning forest use came up in the interviews in other villages than Vohiparara, except for the mention of a few very specific *fady*s.

Although these villages do not have a formal authority over their surrounding forests, they attempt to protect them when they sometimes find themselves opposed with outsiders competing for using the same forest. In all study villages except Amboditanimena, there is at least one story about forest companies, “people from Fianarantsoa”, or gold miners exploiting their forests. What is positive is that in these situations communities have managed to get help

from local authorities namely Chef Forestier, MNP, or the mayor, in most cases succeeding to make the outsiders leave.

The appropriateness of *tavy* is a contested topic in Tanala villages, especially in Manokoakora and Torotosy. Especially in Manokoakora, many villagers who take part in the popular community association for conservation, reforestation, and agricultural development advocate for abandoning *tavy*, leading to frequent conversations and debates with those who want to continue the traditional practice. The laws on burning (that define limits and safer practices for burning) have offered guidelines by which tavy can be done within limits that community members can agree on to some extent. The argument is still ongoing and in Torotosy many interviewees tell that villagers turn each other in to the Chef Forestier who in turn sanctions illegal burning.

Problems of environmental degradation and the value of forest in maintaining ecosystem services such as clean water and humid climate were discussed in most of the interviews. There are contrasting views even among family members of the necessity of the National Park. Some state that the National Park is indispensable for conservation, otherwise locals would use all the forest, whereas others think that it is not their traditional way of life that is the cause of deforestation and that they do not need the National Park to protect their forest. Some of the latter types of statement include a strong sense of ownership of, and belonging to, the land and an opposition to the "exploiter" role that local people are given by conservation authorities:

> *"We always protected the forest but now the national park has taken from us the right to protect it and to take benefits from it. Way back people shared the forest and everyone was responsible for their own actions. We used to collect honey, crayfish, and keep zebus there. We also enjoyed walking in the forest. We still could go there but people do not go often anymore because they are afraid. NP agents have told us that cutting a tree is like killing a person and exploiting the forest will be heavily punished."* – Man 40, Torotosy

6.3 Actors involved in conservation in the region of Ranomafana

Figure 10 presents the actors involved in the conservation and management of natural resources in RNP. Environmental legislation is implemented by the Chef Forestier in all state owned land except in the protected areas which are controlled by MNP. The Chef Forestier and MNP both operate under the Ministry of Environment and Forests and they cooperate in restricting the use of forest by local communities and users coming from outside the area (red arrows).

CVB and partner organisations are conducting the outreach program that includes environmental awareness raising, health and hygiene program and agricultural training. This combined with compensation and employment offered by MNP constitute the "direct benefits" received by local people (blue arrows). The users of natural resources are the local communities but also many external users such as forest companies and gold miners who come from other regions. The livelihood of the local communities, unlike the external users, depends entirely on these lands and resources, and justifiably, they are defined as "primary stakeholders of conservation" by MNP (MNP 2014). What must be acknowledged is that local communities are not only users. As discussed above, they also manage certain resources, negotiate land uses among themselves and a range of external users (not referred to in the MNP strategic management plan), and are able to disobey the law. They also participate in the patrolling of the park, in helping to ensure compliance with laws through CLP activities.

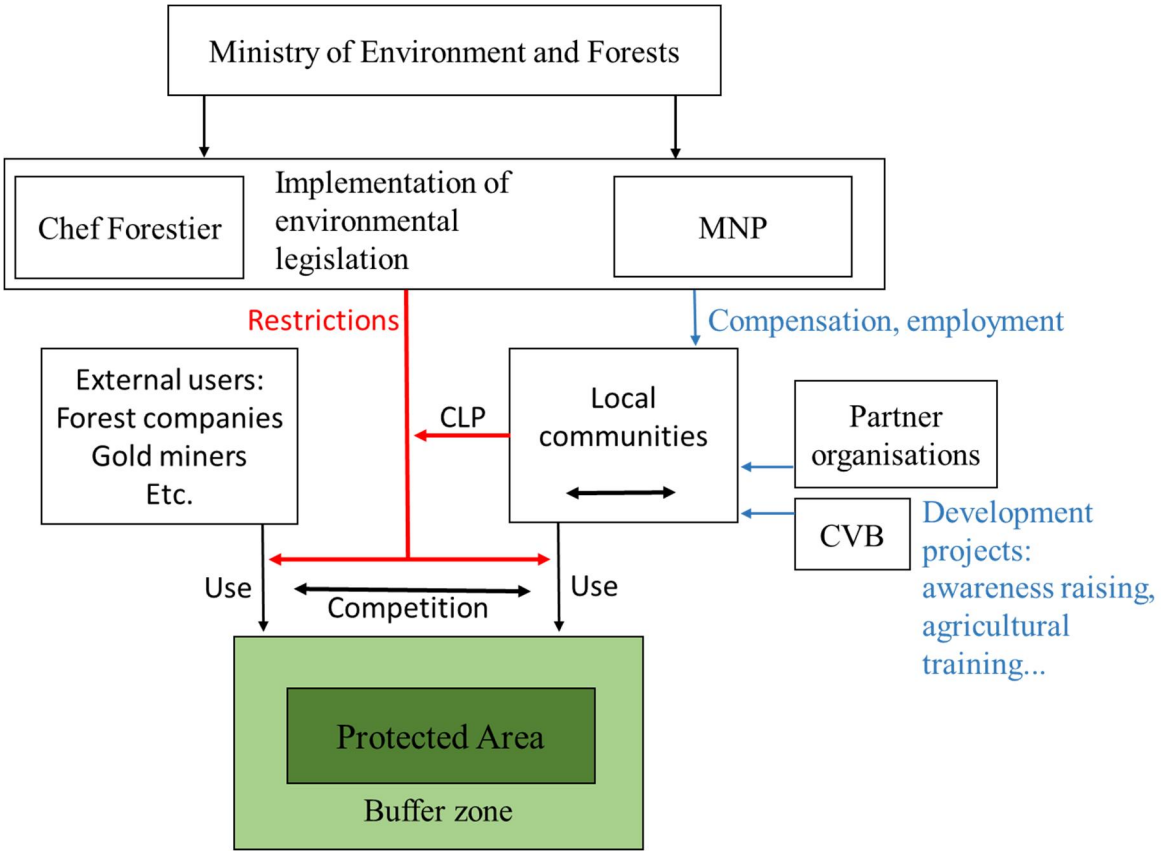

Figure 10. The actors involved in conservation in the region of Ranomafana

6.4 Distribution of benefits

Co-management indicator: "*Direct financial benefits accrued by neighbouring populations*"

According to MNP, the director of RNP, and many local participants, the development projects that have been implemented to date in the communities surrounding RNP have been far from

successful or sustainable. The reasons for these perceived failures are many. As the director of RNP puts it:

> *"The value that people have lost cannot be sufficiently compensated by the support MNP is giving. People say that they have not gotten any help because the help has been punctual. It has not helped them sustainably."*

Despite the limited success of the local development projects, it is clear that people in the villages are used to the idea that MNP is supposed to give them aid. In fact, during my fieldwork, the majority of interviewees asked me to send a message to MNP telling them that they (the villagers) need money, materials, infrastructure, and technical help as well as land. Many also expressed that MNP has a moral responsibility to help them: to compensate to the local people for that which has been taken away from them. They state that the benefits they have gotten from RNP were either non-existent or insufficient in compensating the losses RNP has caused.

The issue of distribution of benefits was also raised:

> *"The park pays communities for protected areas. But this is not so simple. Half of the people get the money, some people get nothing. One village may benefit but others not."*
> – Ranovao, focus group with women

The coordinator of conservation education (CVB) explains that even though half of RNP's entrance fees (50 % DEAP) continued to be given to local projects the system cannot solve the main problems. Giving money for small projects can be unequal because it favours those who can write a good proposal over the majority who have no experience in proposal writing but who are motivated and hard-working. This can be seen among the study villages: one village had received the 50 % DEAP three times while another not even once. Also, even though CVB is or has been working in each study village, all residents cannot be reached. This may be due to distance of some houses from the main village or social divisions in the community. Business opportunities created by eco-tourism in other villages other than Ranomafana are practically non-existent, as told by residents of the villages and guides of RNP.

Villagers in four household interviews and several village meetings proposed that the solution for their livelihood problems would be for MNP to offer them work and preferably stable employment. In Torotosy, Ranovao, Amboditanimena, and Vohiparara, MNP has provided the residents with work such as building tourist tracts. In all but one community workers tell that

they are not satisfied with the work, as it is offered irregularly and payments do not come on time, which for many indicates a lack of respect for the workers. As one villager expressed:

> *"[T]he salary never comes on time and NP does not otherwise take care of its employees."* – Ranovao men focus group

Interestingly, while other communities claim having only part-time and unreliable jobs for very few community members, as many as 62 people from Ambatolahy work as agents of RNP and 65 as guides. Still, they say that this is not enough. Villagers tell that the community is divided in their opinion of RNP: there are some who support the organisation, but many are jealous because they have not gotten employment and they feel that conservation is threatening them.

6.5 Local participation in patrolling of the Protected Area

In 47 communities at the buffer zone of RNP villagers have formed committees for park patrolling (Director of RNP). Each participant is paid by MNP a daily salary. The young men of Vohiparara and Torotosy take part in the CLP and they patrol the forest with a mixed brigade of local gendarmerie, police, and army personnel looking out for any illegal activities taking place within the park. According to the MNP strategic management plan, CLP activities also include boundary maintenance, awareness and outreach in their respective communities, fire control and support to researchers, but these were not mentioned in the interviews. MNP decides on a patrolling operation around Vohiparara every 10–15 days, and recently, in each of these patrols, illegal activities have been spotted, often more than five cases per patrol (Gendarmerie, Vohiparara). In Torotosy CLP operations are more irregular and the members cannot count on it as a source of income.

From the point of view of one particular local villager, the membership in CLP means an income opportunity, albeit an unreliable one. Some are also motivated in conservation and everyone involved is motivated to work for MNP for different reasons. In their Strategic Management Pland 2014–2024, MNP presents as a sign of successful co-management. "*[T]he extent of CLP participation in protected area management – – gauges both the director's efforts to integrate the CLPs into park or reserve activities as well as the willingness of the CLP to participate*" (MNP 2014: 62).

To better understand the meanings of patrolling activities at the local level it is also important to know who are the ones being patrolled. The main illegal activity at the moment is gold mining and the miners come from villages around the park and also from other regions. Gold miners are unorganised and driven to this activity by hunger and poverty (Gendarmerie, Vohiparara).

Especially in Betsileo side of the park MNP is in direct conflict with some northern villages because of gold mining (Coordinator of Monitoring and Partnerships Department, CVB).

> *"The CLP is patrolling and reporting if they see illegal activities. The problem is that the criminals are armed and as they recognise the faces of CLP members they might take revenge. There is a tension between the villagers of Vohiparara and the criminals. There has been no attacks so far but CLP members are afraid because the criminals keep following them. They do not dare to go to the market for instance."* – Man 34, Vohiparara

At the Tanala side, tavy is the main illegal activity although gold mining also takes place. A key informant in Torotosy tells that lately many people have been arrested by the Chef Forestier, who in turn is assisted by CLP. One striking example of such an arrest is an incident told by a woman who explains that since her husband died, the family has been in trouble because they needed new land to cultivate but could not make it because it is men's work:

> *"My son was taken to Ifanadina to be punished for burning. He was only 12 years old and he had done it because he wanted to help his family by creating a small piece of field. He was sentenced to pay a 20 000 Ar. fine. It was people from both Bevoahazo and this village who turned him in."* – Woman 35, Torotosy

6.6 Local involvement in conservation

Participation in the creation of the NP and its rules has been virtually non-existent in most of the study villages. Not a word was mentioned about COSAP or any kind of community involvement in management of the national park.

The creation of the RNP was discussed with the elders since it has happened more than 20 years ago and many younger interviewees may not remember it. In Manokoakora, Vohiparara, and Ambatolahy the National Park involved signed permission from the village leaders. In Amboditanimena the creation of the NP was not discussed since the NP started affecting the people only with the forced evictions that took place when the park had already been established. According to the interviewees in Torotosy and Ranovao, the boundaries of the NP were never discussed and the rules simply came to them top-down. People could read the new rules on noticeboards or in letters from government.

The lack of participation and communication (i.e. the strict top-down conservation policy) has a range of consequences at the local level. Local people's perceptions on the imposed rules and MNP affect the ways they react to these rules and how they view their own possibilities to influence them. The ways rules are negotiated and enforced as well as any contact local people

have with MNP personnel affect local people's sense of being respected and heard, having a voice and feeling equal. The extent to which the rights and human dignity of local people are respected ultimately defines whether they can feel and have ownership of a project and view any rules as legitimate. Table 6 presents how local people react to the rules of RNP and the ways in which they are, and have been enforced.

Table 6. Local reactions to top-down rules

Reaction	Description	Example
Approval of rules	Distance to NP makes rules irrelevant, Economic benefits gained from MNP exceed losses	"*There are good things. Forest protection guarantees pure air and water for us. Also sometimes the NP offers our son work such as building tracks in the park*." – Woman 58, Torotosy
Disapproval of rules	MNP is seen as unjust, untrustworthy, disrespectful, and unconcerned for the local people's rights and wellbeing	*"The national park betrayed us*." – Man 77, Ranovao
Obedience (reluctant)	Fear for authorities and punishments	"*The villagers are afraid of the authorities and this is why we obey and do not try to negotiate. But we are very unhappy*." – Man 70, Ranovao
	No means to negotiate	*"I do not want to change anything because the park does not bother me. I have no means to complain so I follow the rules*." – Woman 38, Amboditanimena
	Denial of problems	"*There is no negative side, only that we do not have enough* [resources] *to make our living*." – Man 55, Amboditanimena
Attempts to negotiate	Open argument, propositions for changing the relationship with MNP	"*In my opinion a local association should be established to facilitate things with RNP and manage crayfish catching in Vohiparara*." – Man 39, Vohiparara
Disobedience	Poverty and hunger force people to illegally use natural resources	"*The ordinary people are deprived of their only livelihood and possessions and they understand that the law is not on their side but against them*." – Woman 24, Amboditanimena
Opposition	Armed conflicts	Gold mining conflicts between RNP and north-western villages

Even though there are some people who find the rules of RNP reasonable the majority of the interviewees have difficulties accepting them. The fact that there has been no local participation in decision-making and that the relation with MNP is found disrespectful triggers very negative

attitudes. Furthermore, mistrust resulting from the lack of communication may create obstacles for local people to trust development projects (as described in Ranovao). Despite the common dissatisfaction with MNP, few (16 out of 46) interviewees state that they would like to change the rules or practices. The reasons are related to the hierarchical governance where authorities are feared and ordinary people do not see any possibility to influence decision-making. In some instances this leads to passiveness and a denial of problems even though they clearly exist: why bother trying the impossible?

Despite the strong hierarchy and the lack of means to communicate with the authorities, most interviewees express a will to cooperate and communicate with MNP. There are different propositions for what should be changed. The propositions mostly involve MNP giving them either work or land or other kind of help. But there are also individuals who want to change the relationship between the communities and MNP. The idea is especially strong in Amboditanimena, where one could imagine that residents would be most bitter towards MNP due to the displacements. Residents of Amboditanimena express a will to negotiate land rights with MNP but also the fact that they have not yet been able to do so. The most positive perceptions on cooperation with MNP were in Vohiparara that already is very much involved with conservation activities and has personal contacts with MNP staff. In Vohiparara people also tell about an ongoing argument they have with MNP about crayfish that they would like to catch inside the protected area while the population in their own forest is recovering. During the years, communities have in fact managed to negotiate a few permissions with MNP. It is allowed to keep zebus in the forest: this way children are not needed to guard them and they can go to school. Also, during the rice harvest people are allowed to gather crafts materials from the forest to make carpets needed in rice processing.

Even so, it becomes evident that while local people have positive expectations, the reality remains that all communication and cooperation is dependent on MNP:

> *"Sometimes we do some cooperation with MNP. I can only hope that MNP wants to cooperate with us because it is the authority. The villagers always want to hear what MNP has to say."* – Man 45, Torotosy

As discussed above, people who disobey environmental laws are ordinary individuals, rather than organised gangs. The rules are disobeyed when no other possibility exists: the poorest of the society must make their living somehow. Direct opposition and even armed incidents with MNP are taking place in the north-western Betsileo villages (not included in these study villages) (CVB, Coordinator of Monitoring and Partnerships Department).

7. Discussion

7.1 Key findings and reflections vis-à-vis the broader literature

This thesis attempts to analyse the management of a strict protected area, namely the Ranomafana National Park, from the point of view of the local communities. It inspects the local involvement in biodiversity conservation and resulting social impacts related to the ways local communities are willing to organise and manage natural resources and co-operate with conservation authorities.

The literature review shows that throughout its history, RNP has been managed in a strict top-down fashion, with only a fraction of attempted community-oriented approaches offering local communities different development projects and some financial compensation. Currently, local communities are defined by MNP as primary stakeholders of conservation, but the results of this study show that in practice their rights have not been recognised: the majority of local villagers expressed a frustration due to having no means to communicate with authorities or to influence the rules that so directly affect their lives. Even though they wanted to cooperate, the problem – as expressed by the villagers – is that MNP decides when and how to communicate.

Another point of concern is that of equity, recognition and participation – key pillars of environmental justice, as argued by Schlosberg (2013), and critical for obtaining a truly morally justifiable conservation strategy, as suggested by Brechin et al. (2002). The negative consequences of the strict PA continue to be borne by local communities, especially the weakest social groups, and these exceed the benefits that are intended with the existing but few development projects. No representative participation in decision-making on the PA management exists in the study villages. Thus, the local communities are not recognised as equal stakeholders of conservation and their rights to equitable treatment and participation in decision-making are not respected.

Disrespecting local communities' rights and the lack of communication have important consequences on the relationship between MNP and local communities and the legitimacy of the PA, and hence also the ultimate likelihood of successful conservation outcomes. The interview data shows that the imposed rules and regulations, and the authorities enforcing them, are mostly seen as illegitimate in the eyes of local communities. As has been experienced also elsewhere in Madagascar (Peters 1999; Kull 2002), this study similarly demonstrates that imposed, dogmatic anti-fire rules have resulted in local opposition and only further emphasis on *tavy* as an essential part of culture. Similarly, the top-down conservation approach that imposes rules on local population without their consent or consultation has created resentment

towards conservation authorities. In parallel, decades of unsustainable development projects and insufficient compensation have led to scepticism, and as I have shown in this study, the reactions to top-down governance are many and have already led to mistrust and even direct opposition.

The other co-management indicators (besides participation in decision-making by COSAP) defined by MNP, namely distribution of benefits, participation in CLP patrolling, and community-management of forest areas, are perhaps fine goals but this study shows that they can have complicated social outcomes due to the hierarchical governance structure in which they are implemented. Below, I discuss what kinds of implications the implementation of "co-management" has on the social organisation of local communities.

The current top-down conservation repeats the hierarchical governance structure which continues to subordinate local communities, and creates a power dynamic where local people are too afraid to speak up or try to influence. The lack of means to influence or forums to discuss makes local people feel powerless and a part of them become passive and rather deny problems than try to change them. The hierarchical structure is repeated in the donor–recipient relationship of development programs and employment. Decades of supervision, environmental awareness raising, and assistance have led many community members to a position where they passively wait and expect outside intervention incapable of taking initiative or imagining that the change could come from the community – not only from external aid (as discussed in Talbot 1995 and Pyhälä 2003). Clearly, development projects have not been able to fulfil the expectation that they would somehow lead to some sort of co-management or a more equal partnership with local communities.

Local involvement in the patrolling of the PA is seen by MNP as an indicator of co-management. Gezon (2006) shows how community members who are hired by conservation authorities face a situation where they have commitments to multiple, conflicting sources of authority, from the formal legislation and foreign conservation norms to local kinship ties. Ultimately, how this unfolds at the local level, and particularly in the case of patrolling, is that CLP members have to choose between these commitments, and a noteworthy aspect in this decision is that even turning against the members of their own or neighbouring communities can provide individual short-term benefits, but at the cost of social cohesion and solidarity. In other words, those with additional sources of income (e.g. from work in the CLP) and thus more options to gain their living can turn the "wrong-doers" in. The so-called "criminals" on the other hand are mostly people who are driven to illegal activities because of extreme poverty and desperation, although in some instances also due to resentment towards MNP. This dynamic

enforces the existing inequalities in and among communities, pushing the already less-endowed individuals and households further into the margins of the society. It also creates tensions and fear of revenge between villagers and families, as well as between villages and park managers, and increases the overall underlying insecurity experienced by the local villagers.

The CLP structure is also a form of decentralisation without empowerment, as discussed by Kull (2002) and Agrawal & Gibson (1999): members of local communities are given the task of implementation of conservation rules without the ability to participate in defining the rules or the authority to resolve disputes. Ribot (2004) and Kull (2002) argue that if decentralisation is attempted without empowering the community, the result is even more centralisation. In this sense, advocating CLP participation as a form of co-management is rather illogical.

The indicator of community-managed forest area gives more to think about when trying to imagine what a true form of co-management could look like. Even when local community rights to participate in decision-making are not formally recognised, local people are still key actors shaping conservation outcomes and natural resources management on the ground. As the results of my own study show, local people emphasise both the value of nature and their own belonging to the land. In this light, one could argue that the goals of local communities and conservationists are not necessarily in contradiction; quite on the contrary. As presented by Martinez-Alier (2013) there is a so-called "environmentalism of the poor" who have the biggest interests in conservation as they are directly dependent on local natural resources.

In order for a community to sustainably and equitably manage a forest area, certain local institutions (for regulating the use of land and species sustainably as well as equitably among community members) must be in place. Yet, as Ostrom (1990) reminds us, without local communities actually having ownership of the land and resources, informal management institutions are likely to disappear over time. This seems to be the case in most of the case study villages of RNP. *Fady*s and other traditional regulations no longer have much relevance in natural resources management as they have over time been replaced by national laws and environmental awareness raising that are based on scientific and neoliberal world views (as found also in other studies, e.g. Hanson 2012; Miller et al. 2014). Especially in Torotosy, Ranovao, and Amboditanimena no discussions about how to manage the forest fragments were witnessed, and hardly surprisingly, as locals feel that the rules and regulations have already been defined and set upon them in law by the Chef Forestier and MNP.

That said, environmental legislation seems to be commonly discussed, debated, and used for various purposes in the study communities. The community members refer to legislation when

confronting external actors (as in other studies, e.g. Berkes 2004) but also in solving intra-community disputes. The contrast between Manokoakora and Torotosy is worth pointing out: while the residents of Manokoakora emphasise constant intra-community debates where some community members argue for following the conservation rules and try to find ways to abandon traditional practices, in Torotosy the discussion is more about punishments and strict conservation rules enforced by authorities, not settled within the community. Yet, as stated in the literature on community-based management (Berkes 2004), solutions to disputes could be made more cost-efficient at the local level (as opposed to often rigid and costly court proceedings at distant administrative centres). For instance, local community organisation could function better for the greater equity and wellbeing of all if intra- and inter-community disputes were solved by the communities themselves – rather than in court. In terms of conservation, it is mostly CLP members (at least in Torotosy) and members of the community association, or landowners (as in the case of Manokoakora), that promote conservation action. Thus, in both villages the ones supporting traditional cultivation practices and gathering forest products are likely to be those in weaker positions in the society.

As Gezon (2006) argues, conservation projects can either reinforce existing power asymmetries or they can empower marginalised segments of the population. All evidence in the RNP case seems to support the former, resulting in the further subordination and marginalisation of the already weakest social groups. MNP and all development and conservation actors in the region should take this problem into serious consideration, as it threatens both social and ecological outcomes of existing policy. If current conservation and development strategies claim to aim at enhancing local livelihoods, they should prioritise at targeting the poorest of the society, the ones most dependent on forest resources, and those most easily driven to carry out sporadic illegal activities in the NP – out of sheer desperation – and seek to offer these weaker pockets of society alternative ways to gain their living and channels to voice and stand up for their rights.

It is evident that the historical oppression of communities around Ranomafana has resulted in a challenge for any new, more participatory conservation initiatives in the area. This burden influences both sides. Local communities are sceptical of new conservation and development initiatives and therefore try to take all the material benefit from them while they last rather than self-organising or designing structures for long-term sustainability, let alone taking ownership of the projects. Meanwhile, conservation authorities continue to blame local people's ignorance for deforestation. This, in turn, means that the so called "co-management" effort, as well as any environmental awareness raising, is likely to be conducted in a disrespectful manner, working

to only further enhance feelings of resentment among local communities. The result is a vicious cycle of mistrust and disrespect on both sides – i.e. communities and authorities – which, over time and generations, is difficult to break. It is difficult for authorities to empower local communities, not surprisingly as local empowerment is hardly likely if communities continue to be governed and treated in a top-down fashion with no respect or regard to their knowledge, culture, history, or civil rights.

While this case study strongly supports the argument of previous literature that top-down conservation models are bound to fail to support well-being and equity of local communities and to gain community approval, it also shows evidence on how the NP–community relationship can be different, and set into a much more positive tone (found only in one study village). Vohiparara is the only village with its own forest which it has managed to maintain despite claims from conservation authorities. On the one hand, the interviewees in Vohiparara speak proudly of the good relations with MNP and the help they have received, on the other hand they tell about the ongoing conflict with MNP over crayfish catching. The propositions by local community members for solving the problem included formation of a community association, reflecting a capability to take initiative, something which at least this study did not find in the other study villages. What might have given this community more initiative than other communities lay beyond the scope of this research, however, one explanation might be the historical opposition, which might have led to a more frequent, prioritised and eventually fluent communication between the community and MNP, with the latter teaching the people of Vohiparara how to deal with MNP, leading to stronger community self-esteem, more courage to confront problems, and therefore and overall a more active community. This question cannot be answered based on the available data but it poses a fundamental and important question for future research attempting to investigate ways for instigating more bottom-up initiative, and for promoting stronger and more equitable and genuine partnerships between local communities and the national park authorities.

6.2 Methodological considerations

The main challenges of data collection for this thesis are related to translation, cultural differences, and inter-personal dynamics between the researcher, the researched, and other persons involved. In a research project concentrating on sensitive topics such as conflicts and tensions between local actors and authorities, building trust with the interviewees and assuring that they will not be negatively affected by the research were my main prior concerns. There was the possibility of becoming associated with CVB or MNP, yet I felt that

this could represent some sort of threat or scepticism vis-a-vis local people. In explaining that I do not represent any donor organisation or conservation authority, it was very convenient that the translators were not from CVB either. I was surprised by the openness and warmth of the people who welcomed me in their villages and homes. Despite the pure kindness and curiosity expressed to me – a complete stranger – reasons for this warm welcoming might have been the expectations that I would perhaps bring some kinds of benefits. Yet, mostly I felt that people were happy that someone was interested in their lives. Some interviewees also asked me to deliver messages to the National Park director and other authorities which I did.

There were one or two cases where the interviewee seemed so uncomfortable answering my questions (even though his/her consent was asked beforehand) that I decided to interrupt the interview as soon as I noticed this. The resulting data from these interviews has been removed from the analysis, however the incidents serve as a remarkably interesting part of observation. These contradictory incidences as well as the continuous observation of the ways in which the villagers reacted to the research group and accompanying CVB guides only helped to deepen my understanding of the relations between the different actors. Judging by my own experience, I would argue that with this type of research questions, the outsider role of the researcher can actually be helpful.

The data collection methods served well the purpose of this research. Especially the semi-structured household interviews, which were the main method, developed greatly during the field work and due to their flexibility were able to capture a wide range of phenomena important in people's lives. This study did not have any specific gender perspective. However, it was taken care of that women and men were interviewed separately when possible. This was in fact very easy due to everyday practices in the villages and women's voice is heard slightly more than that of men's. Having spent only seven weeks in total in Madagascar, I notice that there are barriers more than those related to language to overcome before achieving a truly deep knowledge, trust, and understanding of the local realities. Some information is always lost in translation; nuances and cultural meanings can be missed and sometimes data can be too unreliable and has to be rejected.

The interpretation of data is impacted by e.g. the researcher's disciplinary training, the epistemological and methodological choices made, the researcher's own involvement in data collection, and familiarity with its content (Bazeley 2013). The two latter became particularly obvious stressing the subjectivity of quantitative analysis and the strong involvement of the researcher in the data gathering and analysis. The 'messiness' of social life that Crang & Cook (2007) discuss was manifested in the amount of contradictory answers even in a single

interview. This was a challenge to analyse, yet also the element that made the analysis particularly fascinating and rich – as it simply presented the complexity of the problems at hand. One of the aims of this study was to see the variety in perceptions, opinions, and realities and the used coding method served this purpose well without losing the messiness and bigger and smaller narratives of real life.

In the Results chapter the categories and conceptualisations that emerged from the qualitative content analysis are presented to some extent following the four co-management indicators of MNP. However, an important remark is that these indicators were not used to predetermine the interview questions as this thesis was not intended to be an evaluation of MNPs' strategy towards local communities. Rather, the fundamental principle and the starting point of data collection was the relevance of it for the local residents of Ranomafana region. The meanings that local people give to conservation and the perceptions they have of different actors, including themselves, are attempted to be understood through an analysis of the institutional arrangements governing the PA through the frameworks Political Ecology and Institutional Theory offer on local communities' rights and social organisation.

7. Conclusions

This case study has looked at the institutional arrangements and community involvement of biodiversity conservation in order to help find ways to create a more meaningful partnership between conservation authorities and local communities. The analysis of interview data gathered in the communities around Ranomafana National Park reveals a range of social effects of conservation policies and local reactions to them. An important observation is the variety of actors involved in conservation starting with different social groups within and among local communities. Conservation policies do not automatically treat all community members equally or address inter-community problems. Elite capture of development or conservation activities is a serious threat leading to further marginalisation of the weakest groups.

Despite the co-management efforts from conservation authorities, local communities of Ranomafana region are not properly recognised as partners capable of participating in decision-making of rules that directly affect their lives. The rules of the PA continue to be imposed top-down. Nevertheless, local communities are dynamic actors able to adapt to, oppose, contest, and use environmental legislation. Considering this, conservation policy would benefit from embracing a more legitimate and representative form of governance – one that the local communities approve of and respect. One way forward could be to better implement the

environmental justice principles of *equity* of risks and benefits, *recognition* of rights, and *participation* to decision-making.

One of the main conclusions that can be drawn from this analysis is that in failing to properly address human dignity, and local people's rights as human beings and stewards of their ancestral lands, any attempted co-management easily fails. Economic benefits, environmental awareness raising, or involvement of locals in patrolling do not result in partnership or mutual understandings if no rights are conferred to local communities and communication is lacking. Respect that the local people do have for their land and ecosystems can be hindered by resentment towards illegitimate conservation or by the need to survive in the face of deepened poverty. Empowerment of local communities to take initiative to change their future and organise to manage their natural resources requires some authority over those resources, among other factors. The results of this case study indicate that some degree of autonomy as well as frequent communication with authorities could support community self-organisation and give keys to a creation of a real partnership. This remains as a questions for future research.

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